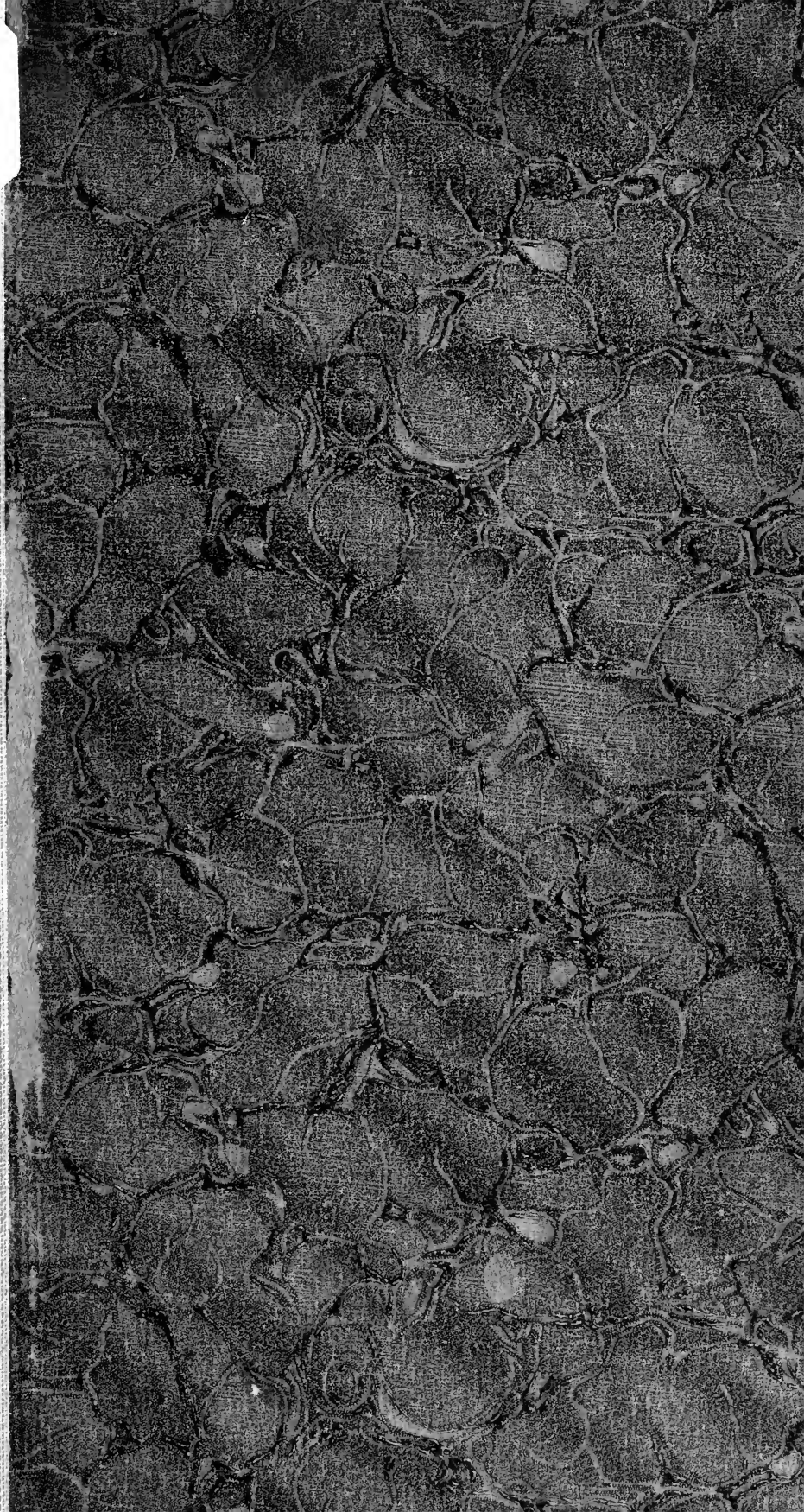


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U.S. Congress, House, Select Committee on Water Power,

**PROPOSED AMENDMENTS TO THE FEDERAL
WATER-POWER ACT**

HEARING

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**BEFORE THE
SELECT COMMITTEE ON WATER POWER
OF THE HOUSE OF REPRESENTATIVES**

SIXTY-SIXTH CONGRESS

THIRD SESSION

ON

H. R. 14469, H. R. 14760, and H. R. 15126

John D. Baker
JANUARY 6, 1921



**WASHINGTON
GOVERNMENT PRINTING OFFICE**

1921

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SELECT COMMITTEE ON WATER POWER.

HOUSE OF REPRESENTATIVES.

SIXTY-SIXTH CONGRESS.

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GEORGE ESCH, *Clerk*.

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PROPOSED AMENDMENTS TO THE FEDERAL WATER-POWER ACT.

SELECT COMMITTEE ON WATER POWER,
HOUSE OF REPRESENTATIVES,
Thursday, January 6, 1921.

The committee met at 10 o'clock a. m., Hon. John J. Esch (chairman) presiding.

The CHAIRMAN. The committee will come to order. The Select Committee on Water Power has been called this morning to consider H. R. 14469, introduced by myself, exempting from the provisions of the water-power act national parks and monuments; H. R. 14760, introduced by Congressman Rogers, of Massachusetts, having a like purpose, confining the matter, however, to water power in national parks; and H. R. 15126, introduced by myself, relating more particularly to the personnel and the establishment of an additional personnel for the Federal Power Commission.

We have present with us this morning the three Secretaries constituting the Federal Power Commission. In what order do the Secretaries desire to be heard?

Secretary BAKER. We would like to have you hear Mr. Payne first.

The CHAIRMAN. We will be very glad to hear Mr. Payne.

STATEMENT OF HON. JOHN BARTON PAYNE, SECRETARY OF THE INTERIOR.

Secretary PAYNE. Mr. Chairman, the general subject of water power will be dealt with by the chairman of the commission, Secretary Baker. The particular matter that I thought you wanted to hear from me about was House bill 14469, introduced by the chairman of this committee.

When the water-power bill was passed and went to the President for signature it was sent to the different departments affected; I called the attention of the President to the fact that it placed the national parks and monuments at the disposition of the Water Power Commission, and that my view was that that should not be; that jurisdiction over the parks and monuments should be retained by the Congress, and I wrote the President on the 4th of June to that effect.

There was a great deal of desire on the part of the country for the signing of that bill, and I was called upon by Senator Jones, chairman of the Committee on Commerce of the Senate, and Senator Walsh. Then I conferred with Senator Underwood and with a few other gentlemen. The House had adjourned, but I reached Congressman Mondell. The result was that Senator Jones wrote a letter, proposing that the bill be amended to meet the objection, which I have here. Do you want me to read it?

The CHAIRMAN. Very well.

Secretary PAYNE. It is addressed to me as Secretary of the Interior and dated June 9, and reads as follows:

The water-power bill awaits the President's signature to become law. I understand your objection to his signing it is because our national parks are embraced within its scope. This bill is so important at this time that its failure to become a law would in my judgment, be little short of a calamity. Hundreds of millions of dollars are awaiting its enactment to go into enterprises that will save coal, start industry, and increase production.

If it does not become a law now, this season will be lost and these large works be greatly delayed, and some may be abandoned.

Your objection has not been heretofore made, although this legislation has been pending for many years. I admit its force. On reflection I believe it is better not to allow permits to develop the water power in these great national beauty spots except by special act of Congress in each case. Therefore, if this bill should become a law, as I trust it may, I assure you that as chairman of the Commerce Committee of the Senate, I will gladly introduce a bill in the opening of the next session of Congress to repeal this provision of the act and do all in my power to get it passed.

I believe the Congress will act promptly upon it.

I trust that with this assurance you will feel justified in withdrawing your objection and urge the President to sign the bill.

Most sincerely, yours,

W. L. JONES.

I then wrote to the President, as follows:

JUNE 9, 1920.

Subject: Water-power bill.

MY DEAR MR. PRESIDENT: Supplementing my letter of the 4th instant, I have had a conference with Senator Jones, chairman of the Commerce Committee of the Senate, and Senator Walsh of Montana, who has been pressing a project involving the Yellowstone Park. The result is embodied in a letter herewith from Senator Jones to the effect that when Congress reconvenes he will introduce and press for early passage a bill repealing the park feature of the water-power bill.

Senator Walsh fully concurs, and while they do not assume to speak for the Senate, they express the view that since the western Senators make this arrangement as a basis upon which I may recommend to you the signing of the bill, that we may safely rely upon the passage of such an amendment.

I stated the arrangement to Senator Underwood on the telephone. He authorized me to say to you that he thought you could safely rely upon this, and that the southern Senators and Representatives, so far as he could speak for them, would cordially cooperate to this end and he hoped you would sign the bill.

In view of this I recommend that the bill be signed.

The bill was signed, pursuant to that understanding.

As to the necessity of preserving the National Parks I have discussed that in my annual report, and if you will allow me to have that read into the record I think it will cover all that I care to say, Mr. Chairman, unless you have some questions you want to ask.

The Chairman. Very well.

(The matter referred to follows:)

THE PRESERVATION OF OUR NATIONAL PARKS AND MONUMENTS.

This is a vital question.

With the rapid settlement and changing conditions of the West, the wisdom of creating national parks and permanently setting apart as natural museums, pleasure grounds, and game preserves such wonder lands as the Yellowstone Park, the Grand Canyon, the Yosemite, the Sequoia (with its gigantic trees), and other national parks and monuments, and preserving for the present and for future generations these wonderful works of nature, and the wild animals and birds, so plentiful in the early days but now so scarce, is increasingly evident.

The conflict between the demands of commerce and the preservation of these wonder places involves constant vigilance. In my view their preservation is of the first importance. It should be the settled policy of the country, regardless of any question of utility, that when in the wisdom of the Congress national parks or monuments are

definitely set apart they must be preserved in their integrity, forever free from any form of commercialization.

If this principle is not recognized, and commercialization in any form is allowed to creep in, it will be only a question of time when our Wild West will be only a memory and the big game of our country will be extinct, and these places and objects, now so wonderful, will be seriously and permanently injured.

It may be well to note, however, that if the argument of utility were permissible, there is usually a ready answer. The water does not remain in the park, and may ordinarily be stored to as good or better advantage outside the park. This is well illustrated in the proposition to dam the Yellowstone River at the outlet of Yellowstone Lake.

The Geological Survey maintains a gauging station on the Yellowstone River near the Canyon Hotel, about 13 miles below the outlet of the lake. The average daily flow at this station, based on complete records for 23 months, is 3,110 second-feet. There are five small streams emptying into the river in the 13 miles between the proposed dam site at the outlet of the lake and this station; hence the flow at the outlet of the lake is obviously much less than at this station.

A station is also maintained on the Yellowstone River outside of the park, at Corwin Springs, Mont., near the head of the Yankee Jim Canyon, some 8 miles below Gardiner. The average daily flow at this point, shown by measurements made during the same period, is 5,870 second-feet.

The volume of water in the river outside the park is, therefore, nearly or quite twice as great as at the outlet of the lake. Indeed, based upon these measurements and the area of land drained, it is the opinion of this department that it is more than twice as great. This increased volume is due to the fact that between the gauging station near Canyon Hotel and Corwin Springs, the Lamar River, Gardiner River, Tower Creek, Trout Creek, Alum Creek, Otter Creek, Sour Creek, Broad Creek, Deep Creek, Hellroaring Creek, Antelope Creek, and other small streams empty into the Yellowstone. A much better site for a dam—due not only to the greater volume of water, but to its location, its deep, narrow rock walls—is Yankee Jim Canyon.

THE FLOOD-CONTROL ARGUMENT.

An argument, quite impressive until analyzed, is that a dam at the outlet of Yellowstone Lake is necessary in order to prevent flood damage from high water in the lower Yellowstone Valley during flood seasons; but, like the argument of utility, this is readily answered.

(a) Yellowstone Lake is a natural reservoir. It is on high ground, 7,741 feet altitude, and the drainage area, compared with other sections of the park, is more restricted and less subject to flood waters; the river from the outlet of the lake to the Upper Falls is placid and little subject to sudden rise. In May, 1920, for instance, when the Lamar and other tributaries were raging, Yellowstone Lake was covered with ice.

(b) The volume of the water in the lake which would be affected by a dam at its outlet is, as previously shown, only half as large as the volume outside the park.

(c) A conclusive argument, however, is found in the fact that a dam built in Yankee Jim Canyon would not only control such overflow as comes from the lake but the larger volume from the Lamar and other tributaries of the Yellowstone.

The flood-control argument, therefore, demonstrates that the dam should be outside the park, and not at the outlet of the lake.

PENDING PROJECTS FOR STORAGE DAMS IN YELLOWSTONE PARK.

A number of projects looking toward using Yellowstone Park for storage of water for reclamation purposes have been proposed:

1. *The Idaho project.*—The first involved the use by Idaho people of Lakes Yellowstone, Shoshone, Lewis, and Heart, the four largest lakes of the park, and the Falls River Basin in the southwest corner of the park, and under a permit granted by the department before I became Secretary some surveys were made of Yellowstone Lake and the Falls River Basin. The proposition is to build a dam at the outler of Yellowstone Lake for storage to hold the level of the lake at approximately its high-water mark, the water thus stored to be conveyed by tunnel through the Continental Divide to Heart Lake, thence into Snake River, to be used in the neighborhood of Twin Falls, Idaho; and to use Shoshone and Lewis Lakes as reservoirs for the storage, the water also to be used in Idaho; to construct two dams in the Falls River Basin, erroneously claimed to be a swamp, the water to be stored there for use in the vicinity of Idaho Falls and north thereof. Only the Falls River Basin part of this project has been pressed.

2. *The Montana project.*—An association composed of Montana people has been organized to secure the right to build a dam at the outlet of Yellowstone Lake, the water to be used for irrigation in southeastern Montana. At first there was rivalry between Idaho and Montana, but this appears to have been composed. It is urged that it is only desired to build the dam 6 feet high. The most casual inspection of the shores of the lake shows that any material raising of the water would overflow many wonderful hot springs, as well as considerable timber areas; the timber in places comes down to the water's edge.

If the precedent of using the park is established and a 6-foot dam built and the water devoted to reclamation or power uses, increasing demands will speedily arise as other lands come under cultivation or need for more power arises, and the demand for a higher dam and more water will arise and will be well-nigh irresistible. A dam at the place suggested of 25 feet could be built and the question would be "Why not"? The park having been opened up, it would then be only a relative question. Such a dam would submerge 9,000 acres of timber, meadow, lake beach, and small lakes—chiefly in the Pelican and Upper Yellowstone Valleys, only a few feet above the level of Lake Yellowstone. The dam would submerge the small lakes and ruin the hot springs at the thumb of the lake. The Upper Yellowstone Valley, which would be submerged, is our best moose range.

THE FALLS RIVER PROJECT.

This involves a section of the park now practically inaccessible. Claimants urge that its conversion from a marsh to a storage lake by the building of dams would enhance its beauty. Fortunately during the summer it was visited and photographed by exploring parties and found to possess wondrous beauty—containing meadows (fine moose pasture), forests, lakes, trout streams, and a number of beautiful waterfalls, ranging from 130 feet to 380 feet.

The bill authorizing this project (S. 3895) passed the Senate April 6, 1920, apparently without opposition. While in the House the purport of the bill became known, serious opposition appeared, and it did not pass, but is still pending.

DANGER TO THE FALLS.

The water stored in Yellowstone Lake, in the case of the Montana project, if not used until the late summer would lessen the flow over the falls during the early summer months, when the park is filled with visitors. The Idaho project proposed to divert the surplus water from the lake so it would not go over the falls. It is probable that such interference with the normal flow would injure the falls and materially decrease the volume of water in the canyon.

LEWIS AND SHOSHONE LAKES.

Lewis and Shoshone Lakes are both in well-timbered forests, and their shores slope upward very gradually; the rise is almost imperceptible over an area of several miles; vast quantities of timber would be destroyed; and when the water would be drawn out, shallow water or mud flats would greet the visitor.

Mr. RAKER. Mr. Secretary, are there any applications now pending under this Water Power Bill for rights in the national parks?

Secretary PAYNE. The secretary of the commission, Mr. Merrill, is here, and he can give you that information better than I can, but some applications have been received.

Mr. RAKER. Is it your view that this provision of the bill—I am just trying to find out if there is any real objection to the enforcing of the law as it now stands under this provision, that licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservations were created or acquired and shall contain such conditions as the Secretary of the Department under whose supervision such reservation falls, shall deem necessary for the adequate protection and utilization of such reservation. I just wondered whether or not if that was strictly enforced any one could get into the parks at all.

Secretary PAYNE. That would depend entirely upon the view of the persons charged with that duty. There are many people who think that the utilitarian part should be controlling, regardless of the effect upon the park. In other words, they think that the use of the water in some form is better for the country than the park use, and, therefore, you have the personal point of view of the persons charged under that act with the enforcement of the law.

I ought to have said that upon the organization of the Water Power Commission we adopted a resolution that we would not entertain, pending this question before the Congress, any applications for permits in any national park.

Mr. RAKER. Then, up to date, even though the applications have been filed under this provision, no one has a right inchoate, a right that he could proceed under to get a permit?

Secretary PAYNE. None whatever. We have declined to receive such applications.

Mr. RAKER. So, up to this time the integrity of the parks is absolutely protected?

Secretary PAYNE. Yes, sir.

The CHAIRMAN. Mr. Secretary, would it meet the conditions and the understanding at the time the power act was signed, if national parks and monuments were limited to their existing boundaries?

Secretary PAYNE. I think so, Mr. Chairman, because the Congress has control of the subject, and when you create a new park you can then make such disposition of this question as seems wise. My insistence is that when the Congress creates a national park, Congress alone should determine whether any other use shall be made of the park or any part thereof.

Mr. SMITH of Idaho. Mr. Secretary, do you think that Congress is better able to determine a technical question of that kind than the Water Power Commission acting upon the advice of engineers and surveyors who go upon the ground and make a report?

Secretary PAYNE. It is not a technical question.

Mr. SMITH of Idaho. It certainly is technical as to the character of the land.

Secretary PAYNE. The moment you put it on the ground of a mere technical question, you destroy the integrity of the park, because you can always get engineers and experts who will say that the park will not be injured and that the utilitarian use is greater than the park use.

Mr. SMITH of Idaho. Upon what information would the Congress act as to the advisability of utilizing any waste water within a national park? None of them have visited the particular section I have in mind, and how would Congress act intelligently, unless they had a report from engineers and surveyors who would be upon the land and make report?

Secretary PAYNE. Congress has every possible facility for getting information.

Mr. SMITH of Idaho. But only the same facilities that the Cabinet would have.

Secretary PAYNE. I am not saying that the Water Power Commission could not get the information.

Mr. SMITH of Idaho. Is it not rather unusual for three members of the Cabinet to attempt to discredit themselves in handling a matter

of this kind, and put it in the hands of Congress, where the Members and Senators are not able to secure first-hand information?

Secretary PAYNE. You are entirely wrong. There is no sort of discredit. This question involves a fundamental question involving the policy of the United States, and Congress having passed the water-power bill and placed the parks and monuments under the jurisdiction of the Water Power Commission, it may be regarded by members of that commission as an instruction that if it appears that the utilitarian benefits may result, then it would become the duty of the commission to grant permits.

Now, I say that that is a fundamental question of policy which the Congress itself should in each case determine.

Mr. SMITH of Idaho. And yet you must admit that Congress has no way to advise itself?

Secretary PAYNE. I do not admit so. Congress has every means of getting information.

Mr. SMITH of Idaho. They can not visit these remote sections, and they must act on the information furnished by engineer and other trusted employees.

Secretary PAYNE. It is not necessary to go to Heaven in order to get information about it. We know it is a desirable place.

Mr. SMITH of Idaho. I am in favor of this bill because of the conditions under which the bill was signed but it seems to me it would be very unusual to want to impose upon the Congress, composed of nearly 500 men, a matter of utilization of the waste water of a park for any purpose, which information and action must be based upon an examination upon the ground by some experts who would make a report to the Water Power Commission and on which report the commission would act.

Secretary PAYNE. Congress, when it creates a park, necessarily considers the whole question, and it has the information at its service, which is at the disposition of the Water Power Commission, at the disposition of the Interior Department, and of all of the persons affected pro and con. For instance, a man came to me the other day and proposed that the Grand Canyon should be used as a reservoir for water.

Mr. SMITH of Idaho. Of course, no one would consider such a proposition as that.

Secretary PAYNE. That man was considering it. I want to make it difficult for people to destroy these parks.

Mr. SMITH of Idaho. So do I, Mr. Secretary; absolutely so, and if there is any project that would in any way injure any scenic attraction in a national park I would be opposed to it, but it seems to me that it is very unusual for the Government to refuse to allow the people to use water which is going to waste.

Secretary PAYNE. The water does not remain in the national parks.

Mr. SMITH of Idaho. No, that is what I am saying.

Secretary PAYNE. If you will be good enough to read my report you will see that in the case of the Yellowstone there is an admirable place for a dam at the Yankee Jim Canyon; that the volume of water there is twice as large as at the Lake in the Yellowstone Park, and that when you have analyzed the question to its bottom you will find that it is only a question of expense, because the land which

would be used in the park as a reservoir does not cost the project anything.

Mr. SMITH of Idaho. And then you want Congress to determine whether or not that sort of project should be utilized?

Secretary PAYNE. I think Congress would not waste very much time on it.

Mr. SMITH of Idaho. No, I think probably that is true. I would not support any proposition of that kind, but what I am surprised about is that the three members of the Cabinet, executive officers, are unwilling to assume the responsibility of determining whether or not the waste water should be utilized in the national parks.

Secretary PAYNE. I have said already that it is not a mere question of expediency; it is not a question of determining by experts whether this or that result might follow; it is a broad, national question of policy which the Congress ought to take the responsibility of determining, and I repeat that if this water-power bill is not amended, commissions may come who will regard the act creating the commission as an instruction requiring them, if it appears expedient from a practical standpoint, to permit the use of the water in the national parks.

Mr. SMITH of Idaho. Then, you are afraid to trust the judgment of three men prominent enough in public life to be selected as members of the Cabinet?

Secretary PAYNE. I leave that entirely to you. You know them just as well as I do. I prefer to trust the Congress.

Mr. SMITH of Idaho. You prefer to trust Congress, Mr. Secretary, because there has been a propaganda organized and conducted within the last six months over this country which has thrown a scare into every Member of the House and every Member of the Senate, and that propaganda is based absolutely on false statements.

I have a circular here sent out by the head of one organization, containing a photograph of the Colonnade Falls, in which it states under that photograph that "this and 40 other waterfalls, cascades, and hot springs will be destroyed" if the proposed reservoir in the southwestern corner of Yellowstone National Park is established.

Now, when a Member of Congress gets that circular he assumes that the statements are true, and yet they are absolutely false; that sort of information has been disseminated throughout this country and has scared the Members of Congress. Many Members of Congress have come to me within the last two or three weeks who were in favor of the Fall River Basin project last session who now say: "Now, Smith, we are in favor of this proposition—we were in favor of it before—but my people at home are so aroused that it would be political suicide for me to vote for it and I of course will not be able to vote for it."

So that is the reason that those opposing the Fall River Basin want to take from the executive branch of the Government the duty of deciding this proposition and put it into the hands of a great number of men who will not take the trouble to investigate it, but will be guided in their action by these false statements, which have been disseminated all over the country. Now, if Colonnade Falls or any other waterfall in the Yellowstone National Park would be injured, I would not be in favor of the utilization of the waste waters of that

section of the park, and if the engineers report show that any waterfall, any hot springs, or any cascade would be disturbed in the least, I would not advocate the bill for a minute.

Secretary PAYNE. Let me say first about the timidity of Congress. Congress is accustomed to propaganda. I do not know of any body in the world so capable of measuring the value of propaganda as the Congress. So that I do not think the Members of Congress are terrified because of some propaganda.

Mr. SMITH of Idaho. You ask any one of them, and they will tell you they are terrified and are afraid to go home, almost, if they should vote for this bill.

The CHAIRMAN. I do not see the relevancy of that.

Secretary PAYNE. I want to make an observation about what you said about the Idaho project, because that project was represented to me——

Mr. SMITH of Idaho. The Fall River Basin project, not the Yellowstone Lake project.

Secretary PAYNE. That was represented to me as a swamp. Now, since that question came up two parties have gone thoroughly through that section of the park. It is not a swamp and there are many admirable waterfalls, and if you want me to I will send the chairman, for the use of this committee, 50 photographs of that section.

Mr. SMITH of Idaho. Oh, yes, Mr. Secretary, those photographs I have here. They were not taken in that section of the park at all.

Secretary PAYNE. Have you ever been through the Fall River Basin?

Mr. SMITH of Idaho. I have been. I went in there on the 7th day of August, at a great deal of discomfort, and visited that Fall River Basin, and the information that I have from personal observation convinces me that the report of the Director of the Geological Survey in 1878, in which he says that the basin is well nigh impassable because of the "swampy, springy nature of the soil" is correct.

Secretary PAYNE (interposing). Now, if this committee wants to know what those facts are, two parties have been through that section of the park during the last summer, and you can call them here and get the facts.

Mr. SMITH of Idaho. Well, would you prefer their statements to the statements of your own officials, men of your own department?

Secretary PAYNE. That was a very long while ago, and I do not know the circumstances under which it was made. I do know that sometimes things get into reports that are not absolutely accurate; but here are gentlemen who at their own expense went through this section of the park, took many photographs, and they are men of reputation and standing.

Mr. SMITH of Idaho. Why should we accept the opinion of a private citizen who is prejudiced instead of an officer of the Government?

Secretary PAYNE. Why should you not accept an opinion of a private citizen, if he is a reputable man?

Mr. SMITH of Idaho. Because he is prejudiced. I know to whom you make reference. I was in there myself; surveyors have been in there who will testify, and if their report shows that any portion of the scenic attractions of Yellowstone National Park are to be ruined,

or even impaired, by the construction of this reservoir I would not be in favor of it for a minute, any more than you would be in favor of it; but I contend that those people living over in eastern Idaho, whose crops are burning up during July and August, are entitled to that waste water.

Secretary PAYNE. Now, when you come to consider what we call the Smith bill, or now, if you will, we want to give you all the facts. Gentlemen who spent weeks in there—not a single day, as perhaps you did, but weeks—and have got photographs——

The CHAIRMAN (interposing). Have these parties filed any report in writing?

Secretary PAYNE. I have a written report.

The CHAIRMAN. Could they present their report and make it a part of the hearing?

Secretary PAYNE. They did that of their own account. One of them is here now and will give you the facts.

Mr. MATHER. Would it not be well, Mr. Chairman, to indicate that this is a matter of an irrigation reservoir? Would it not be well if Mr. Smith made that point, that this is an irrigation reservoir and not a question involving water power?

Mr. SMITH of Idaho. It is not a water power but I am just speaking of the danger in this legislation of throwing everything onto Congress instead of allowing the executive branch of the Government to administer the law and determine whether or not these projects would be injurious to the parks.

Mr. RAKER. I just want to clarify this matter for myself and for Mr. Smith. When this bill was first before the Committee on Public Lands, the Idaho bill, the committee started to report it; I objected; and the committee did not report the bill, although the Secretary of the Interior had made a favorable report.

Secretary PAYNE. Not the present Secretary.

Mr. RAKER. No, sir; not at all. At my request the Director of Public Parks came before the committee and a public hearing was had, testimony was taken in which the Director, who is now present, thought no injury would be done, but would like the opportunity to investigate.

Now, the executive department has investigated, and I take it from the Secretary's report, which I have read, and from Mr. Mather's statement that has been given out, and undoubtedly will be made to-day, a change has occurred after an investigation of the parks, and I hope my friend, Congressman Smith from Idaho, will not take the attitude that Members get scared over these facts; but we want the information.

Mr. SMITH of Idaho. We want the information but the Members are scared; there is no doubt about that.

Mr. RAKER. I feel I ought to state that I want to ask one question and then I am through. Mr. Secretary, if you have gone into it, I would like to have you answer this question: In the bill I find this language—in the law:

The work of the commission shall be performed by and through the Departments of War, Interior, and Agriculture, and their engineering, technical, clerical, and other personnel, except as may be otherwise provided by law.

Now, the proposed bill before the committee, on page 2—

The CHAIRMAN (interposing). You are starting now on consideration of the bill?

Mr. RAKER. The Secretary was going to leave, and I would just like his view on this one matter.

On page 2, lines 9 to 17, of H. R. 15126, I find this language:

In the performance of its work the commission shall utilize in so far as practicable the field offices and field personnel of the Departments of War, Interior, and Agriculture, and it is authorized to employ in the District of Columbia and elsewhere such expert, technical, clerical, and other personnel as may be necessary for the purpose of performing the duties imposed by this act, and as may be from time to time appropriated for by Congress. The detail of persons for such purpose from the Departments of War, Interior, and Agriculture—

And so forth.

Of course, that is a change of policy entirely. Would you give us your view of the necessity for that change, if you have gone into it?

Secretary PAYNE. Presumably, all of the departments have all they can do, and it is the feeling of the commission that the commission must be independent, so far as its help is concerned, so that it can get the information on which it may act by people who are under its direct control.

Mr. RAKER. Then, is it your view that better results would be accomplished, more efficient work would be obtained if it was made independent, as this amendment suggests.

Secretary PAYNE. Yes.

Mr. RAKER. That is all, Mr. Chairman.

The CHAIRMAN. Mr. Secretary, on January 3 the House adopted an amendment to the sundry civil bill, to the section in that bill providing the appropriation of \$100,000 for the Federal Power Commission. The language of the amendment was as follows:

Provided further, That no portion of this appropriation shall be available for any expense connected with the leasing of any power facilities in any national parks or national monument.

The House has adopted that amendment. Do you think notwithstanding the fact that it has adopted the amendment and the possibility that the Senate may indorse it, that we should, nevertheless, act upon this bill?

Secretary PAYNE. I think so, Mr. Chairman.

The CHAIRMAN. In other words, the bill is broader than this amendment?

Secretary PAYNE. That is only for the specific appropriation, and the next appropriation bill might have nothing of that sort in it. I think this is so fundamental that we ought to start right and deal permanently with the subject.

Mr. RAKER. There is one other question I overlooked. This bill authorizes, H. R. 14469, the Congress to grant these permissions. It is your judgment, the authority had better be given to Congress than to deny it entirely, so as to leave it up for future consideration?

Secretary PAYNE. You can not deny the Congress the power, because Congress creates the parks. That [referring to the bill] is not a grant of power; it only provides that no one else may grant permits—no other power may do it. You can not deny the power to Congress.

Mr. BARKLEY. Mr. Secretary, the chairman asked you a while ago about limiting this bill to the present boundaries of national parks. I understood you to say you had no objection to that. Do you think it would be wise to limit it to the present boundaries? If it is proper that the present parks should be thus protected, why is not the same force to be applied in the future to any parks the Government may establish?

Secretary PAYNE. The principle applies and should apply to every park, whether now or hereafter created. I am told that people who are interested in this subject feel that if we should enlarge some of the parks, as some people think we should, that it might become a very serious matter. The basis of my remark to the chairman that I saw no particular objection to that is that when Congress creates or adds to any park, Congress may then make such provision with respect to the subject as it deems wise.

Mr. BARKLEY. But if this bill should limit it to present boundaries and Congress in the creation of new parks should be silent upon the subject, the presumption would be carried that the water power commission could do with those extended or new parks just what you do not think it ought to do with these that now exist.

Secretary PAYNE. Right, but I assume Congress would not be silent.

Mr. SINNOTT. Mr. Secretary, I understand that it is your view that in proper cases these easements should be granted by Congress?

Secretary PAYNE. No.

Mr. SINNOTT. Or, is it your view that Congress in no case should grant the easements?

Secretary PAYNE. I would not say in no case, but I should say that under no circumstances, unless the situation is so compelling that there is no other way to meet it, and I illustrate that by saying that the water does not remain in the park and that the mere question of expense or of expediency is not an argument in favor of doing anything which might destroy or injuriously affect a national park,

Mr. SMITH of Idaho. Do you know of anybody, Mr. Secretary, that wants to injure the national parks, the scenic attractions?

Secretary PAYNE. I know of no man who will admit that he wants to destroy a national park.

Mr. SMITH, of Idaho. I would like to see that man.

Secretary PAYNE. But I know a lot of men who think that these people who insist on preserving the national parks are eastern cranks, and that as a matter of fact the idea of preserving them at the expense of losing the water which could be used for power or reclamation is an argument that the western man has no patience with. Now, I deny that. I found as genuine an interest in the parks in the West as in the East.

Mr. SMITH of Idaho. Undoubtedly so. I think that is true.

Secretary PAYNE. But I also find that special interests are pressing for the right to encroach upon the national parks and their interest is in the use of the water power and the getting of free lands in connection with the use of the water power, and not in the use of the park lands for park purposes.

Mr. RAKER. But the misfortune is, Mr. Secretary, that we are in favor of the parks and their utilization and maintenance as strong as the people in the East if not more so.

Secretary PAYNE. Generally speaking; yes.

Mr. RAKER. But we are expending our money to build the roads to the parks and from the parks and maintaining and paying our taxes, but our good friends in the East are mighty tight on the purse strings when it comes to assisting in maintaining and building up the parks, and I hope they will just loosen up a little in the future.

Mr. SMITH of Idaho. Mr. Secretary, can you imagine the attitude of mind of a thousand farmers out on the desert, with their crops burning up and seeing the water running past them, because of the fact that they are not permitted at their own expense to save it?

Secretary PAYNE. Congressman Smith, you know that argument is greatly overlooked.

Mr. SMITH of Idaho. I do not think it is in this particular case.

Secretary PAYNE. Because I gave a hearing to the Montana people with reference to the damming of the Yellowstone River at the outlet of the Yellowstone Lake when I was in the Yellowstone National Park in July, and I said to them, as I point out in my report—they argued quite at length and when they got through I said—“Now, gentlemen, we have hydrographic stations in the Yellowstone River near the Canyon Hotel, and a like station outside of the park at Corwin Springs. There is twice as much water outside of the park at Corwin Springs as there is in the park where you ask a permit to build your dam. Why do you not want to build the dam outside the park?”

Now, what do you suppose the answer was? That the project could not afford to carry the expense. Why, I said, “That can not be true, because you can build a dam in the Yankee Jim Canyon much cheaper than you can on the flat lands at the outlet of the Yellowstone Lake.” “Oh, but,” they said, “lands would have to be purchased for the reservoir to hold the water.” “Oh,” I said, “then it is purely a question of expense. In the park the lands are public and do not cost anything, while outside you would have to buy the land and pay the damages for overflow.” In my view this argument can not be entertained for a moment. The parks were not set aside for power purposes.

Mr. SMITH of Idaho. But in the case of the Idaho project, Mr. Secretary, it has been demonstrated by your own engineers that there are no reservoir sites outside of the park that will aggregate more than 37,000 acres. There are nine reservoir sites outside, but the quantity of water that could be conserved in these nine reservoir sites is only 37,000 acre-feet, whereas in this Fall River Basin, 200,000 acre-feet can be conserved by simply building one dam.

Secretary PAYNE. I have given the subject of outside availability no consideration with reference to the Idaho project, but if you want me to find one, I will try.

Mr. SMITH of Idaho. I should be very pleased if you could find one, because the engineers of the Reclamation Service tried to find it and did not succeed.

There is one more question I would like to ask, Mr. Secretary. You know, the boundaries of the Yellowstone National Park were established without surveys in 1872, just simply a blanket reservation. Is it not quite probable that there is a lot of land adjoining the Yellowstone National Park that contains a great many scenic attractions which should be inside of the boundary line of the Yellow-

stone Park, and is it not quite likely that some land in the park really has no scenic value and should be outside?

Secretary PAYNE. I do not know of any inside that ought to be outside, but I do know some outside that ought to be inside.

Mr. SMITH of Idaho. Then, you will admit that you do not know the conditions?

Secretary PAYNE. For instance, I want the Grand Tetons in. I am very much in favor of that.

Mr. SMITH of Idaho. I think they should be in.

Secretary PAYNE. And I also want to exclude Jackson Lake when you do that.

Mr. SMITH of Idaho. I think that would be a good idea, because there would be a conflict of authority there in regard to the water. But you are not ready to admit that the Fall River Basin should be outside of the park?

Secretary PAYNE. No; nor will you, after you hear these gentlemen.

Mr. SMITH of Idaho. Well, if I am to believe them in preference to my own observations, of course I would not.

Secretary PAYNE. Well, their opportunities were greater than yours.

Mr. SINNOTT. Will you make any distinction between appropriating water in the park and constructing a reservoir therein, which might be termed a commercialization of the park, and the granting of a conduit right or a right of way across a park or a portion of the park?

Secretary PAYNE. There might be a very material difference but I do not visualize just what you have in mind.

Mr. SINNOTT. The park might lie between adjacent country where you are taking the water from and it may be very inconvenient to go around the park, and the crossing of the park might be a little matter that the commission might take care of, a mere right of way for a transmission line or a ditch across a portion of the park.

Secretary PAYNE. If the commission in dealing with projects outside of the park should find a situation of that kind, where it would not injure the park and should make a suggestion to Congress, Congress would not be slow to deal with it.

Mr. SMITH of Idaho. Then, after all, Mr. Secretary, the Water Power Commission will be interested somewhat in the park. In the utilization of water in the national parks. And if they should find that a park would not be injured, in making report to Congress, they would probably accomplish just what you want to accomplish in passing this bill?

Secretary PAYNE. I do not know that any situation such as Judge Sinnott suggests would ever arise. I do not know, but if it should arise, certainly the commission would deal with it by requesting the Congress to act.

Mr. SMITH of Idaho. Then, in that instance, you would rely upon the judgment of the Water Power Commission, upon information furnished by these experts, instead of upon Congress?

Secretary PAYNE. Not at all. Congress is not going to put a rubber stamp on any recommendation of that sort without giving it consideration.

Mr. SMITH of Idaho. Oh, yes; if three cabinet officers recommend anything to Congress we pass it without much trouble.

Mr. BARKLEY. Cabinet——

Mr. SMITH of Idaho (interposing). Mr. Secretary——

Secretary PAYNE (interposing). Even the President has recommended certain things to the House and Senate that have not been approved.

Mr. SMITH of Idaho. Since you have been Secretary of the Interior we can not get a bill through Congress affecting the public lands unless the Secretary of the Interior recommends it. If they find the Secretary does not recommend it, there is nothing doing.

Secretary PAYNE. I am very much obliged to Congress. I do my level best. [Laughter.]

The CHAIRMAN. If there are no other questions——

Mr. MATHER (interposing). Before the Secretary leaves, Mr. Chairman, the specific form of an amendment in line with your suggestion is in the hands of Mr. Pierce here. Would it not be well if he could suggest that and then get the Secretary's viewpoint on it?

Secretary PAYNE. I would rather that would come up later.

Mr. SINNOTT. Which is the bill that you are urging, Mr. Secretary?

Secretary PAYNE. H. R. 14469.

The CHAIRMAN. Secretary Baker, we will be glad to hear you now.

Before you start, if there is no objection, I will designate the clerk of the Interstate and Foreign Commerce Committee to act as clerk of the Committee on Water Power.

STATEMENT OF HON. NEWTON D. BAKER, SECRETARY OF WAR.

Secretary BAKER. There are two bills here, Mr. Chairman—three, I think—but two of them comprise the principal subjects of discussion. The first one has been adequately covered, I think, by Secretary Payne. I have nothing I can add to that, unless the committee wants to ask some questions about it. That is in regard to the national parks.

The CHAIRMAN. Are there any questions with regard to H. R. 14469?

Mr. RAKER. Mr. Secretary, the same question I asked Secretary Payne in regard to the law, that is now in the act, relative to the power of the commission, I would like to ask you.

Secretary BAKER. That is the second of the two bills, Judge. The first has to do with water power.

Mr. RAKER. The first one, 14469, which contains the provision that no license or permission shall be granted unless it shall not interfere with the park and shall be deemed adequate protection and utilization of the reservation. Your view is that notwithstanding that provision in the law, better results would be obtained if the power was taken from the commission entirely and left up to each individual case to be presented to Congress to determine whether or not the park should be used for any of these purposes?

Secretary BAKER. I think so, Judge. The only observation I would have to make about that is not that the present members of the water power commission distrust either themselves or their successors, I have not that feeling about it, but it seems to me that

national parks do stand in a very particular case. They are a permanent public reservation of incalculable value to posterity, and the action which is recommended here would seem to me to serve notice on all mankind that they stood in a different case, so far as their development and exploitation is concerned, from any other lands which the Government owns or any other rights which the Government controls, and if this legislation were passed in this form, persons who were seeking to exploit these powers would realize that they had to make a case that satisfied the representatives of the people of the whole country, and that it was a national interest that was especially regarded as sacred and protected by this extraordinary necessity.

Mr. RAKER. In other words, that the publicity given by the attempt to get a bill through Congress would focus the public's attention on it so that if there was any destruction of the park it would be found out before the bill would be able to get through?

Secretary BAKER. Exactly so, sir, and it seems to me—I know very little about the national parks; I never have had the privilege of visiting them—it seems to me that local interests might very well see their local needs larger than the national interests and it might be pressed upon a Commission with a large array of persons brought from a particular locality to show the necessity. The unrepresented persons in any such hearing as that would be the general public. In Congress they would be represented by their Representatives.

Mr. RAKER. Would you not have time to get out and visit them before the 4th of March?

Secretary BAKER. My time is growing very short, unhappily too short, for that great pleasure.

Mr. RAKER. We would be delighted to have you come because we know your heart is in the right place.

Secretary BAKER. I should be glad to come.

The CHAIRMAN. I wish you would give us your views, Mr. Secretary, of H. R. 14469.

Mr. SIMS. I would like to ask you one question, Mr. Secretary. Under the law, under the act that has been passed, does the commission as now constituted under that law have the authority to grant water-power sites in these national parks?

Secretary BAKER. I think so, sir.

Mr. SIMS. And you do not think that that power ought to be retained by the commission?

Secretary BAKER. I think not, sir.

Mr. SIMS. Do you think we should require a special act of Congress in each instance of that kind?

Secretary BAKER. I think so.

Mr. SIMS. Well, it used to require a special act to authorize a dam built on a navigable stream, and it does seem to me that the argument is with you, that when it comes to despoiling or doing that which might despoil a great national park or national monument, I do not think your little commission of only three ought to have such vast powers. I think it ought to be in Congress. It does take the consent of Congress now to build a highway bridge across a navigable stream.

Secretary BAKER. I am very sorry that the argument goes so far with its complications. As a matter of fact I think the release of

the dam building privilege from the necessity of congressional intervention in every case is the most hopeful thing I know—I am sure the judge does, too—that has happened for a long time, and if the national parks did not stand in a separate situation, if they were not a national asset for all time which, when once destroyed, can never be replaced, I should very much doubt the argument that I have made or Judge Payne has made in behalf of this bill; but I think they do stand in a different relation.

Mr. RAKER. There is one question I would like to ask. The Lassen Volcanic National Park is in my district, very close to Crater Lake—I am familiar with the others, and this question has been put to me in the last four or five months, urgently put: Are there any applications now—in addition to what Secretary Payne said—whereby an inchoate right might be in any of these applicants that they could proceed to force a right, and should any legislation be enacted on this bill to prevent that?

Secretary BAKER. There are no rights now in existence of any sort. There are no equities in existence of any sort unless applications, should this bill be passed, applications made pursuant to it to the Congress. Then Congress might see that it would be equitable to recognize a certain priority in those who had previously filed applications with our commission, which have received no consideration there.

Mr. RAKER. So far as your commission is concerned, there are no applications pending now whereby the parties could claim an inchoate right or priority by virtue of their filing, that would require any legislation to wipe out?

Secretary BAKER. No, sir; there are none.

Mr. SMITH of Idaho. Mr. Secretary, is it not true that your commission has absolutely refused to even receive, accept, or consider any applications filed under this law, which has been on the statute books three months, applicable to national parks.

Secretary BAKER. Yes, sir.

Mr. SMITH of Idaho. Under what authority of law do you, an executive officer, refuse to accept those applications, even to accept them for filing?

Secretary BAKER. We have them up at the office but we have declined to consider them.

Mr. SMITH of Idaho. They have not been filed, I understand; they have not been put on the docket.

Secretary BAKER. They have not been particularly filed and have not been advertised.

Mr. SMITH of Idaho. Then, the law is not being enforced in that regard?

Secretary BAKER. I am afraid it is not.

Mr. RAKER. I understand you were anticipating just what these letters showed, that Congress would repeal this law so as to protect the parks.

Secretary BAKER. Judge Payne has had conference with Members of the House and Senate available at the time, and their general disposition was that that was the wise course of action and we have withheld the creation of any rights, equitable and legal, pending Congressional consideration.

Mr. RAKER. Technically, you held the law up a little? I want to commend you, so far as I am concerned.

Secretary BAKER. As a matter of fact it has not been a very large crime because the organization of the commission has taken so much time that nobody's rights have yet been considered, very much.

The CHAIRMAN. Do you desire to express your view with reference to 14760 as compared with 14469, the bill introduced by Mr. Rogers?

Secretary BAKER. I do not know the difference between those bills, Mr. Chairman. I would like to say with regard to one question which was suggested here, that I think the bill ought not to have an amendment limiting it to parks in their present limits. I think it ought to apply to all national parks.

Mr. SMITH of Idaho. Mr. Secretary, are you aware of the bills that are pending in Congress adding hundreds of thousands of acres to the national parks already existent, in which there are dozens of power sites?

Secretary BAKER. Yes, but I think the way to deal with this is to lay down the general policy in this bill, that all power sites erected within the limits of national parks must be done by special Congressional approval and then in these bills which are pending, to add if you see fit in any one of those to exempt it from these provisions. I think it ought to be positive exemption rather than by negative and omission.

The CHAIRMAN. Now, do you—

Secretary BAKER (interposing). The second bill—

The CHAIRMAN (interposing). 15126?

Secretary BAKER. Yes. Judge Raker read a portion of that on page 2 and asked the Secretary of the Interior his judgment as to whether that change of policy was right and wise, and with great deference to my associate, Judge Payne, I think his answer was hardly full enough.

Mr. SINNOTT. What is the change contemplated, Mr. Secretary?

Secretary BAKER. I do not think it is a very substantial change, Mr. Sinnott. This is what it says:

"In the performance of its work the commission shall utilize in so far as practicable the field offices and field personnel of the Departments of War, Interior, and Agriculture, and that"—That I think is what we are now obliged to do. The change there is that—this says: "in so far as practicable," and the present law says we must do it exclusively.

Mr. RAKER. The law requires you to do it?

Secretary BAKER. The present law requires us and limits us to the offices and field personnel of those three departments; this law says that the commission is to use those as far as practicable, but authorizes us to supplement them by agents employed directly by the commission, and my judgment is that it is not a desire on the part of the commission to secure an entirely independent personnel which leads us to suggest this amendment, but it is the inadequacy of the facilities available in those three departments which makes us think we must have the right to supplement them.

Now the situation is this on the larger aspects. There have been filed under this bill, since the commission has been organized, applications for something over \$1,000,000,000 worth of developments.

Mr. Merrill is here and has all the figures, and the committee, I am sure, will want to inquire of him about it.

That is five times as much prospective development as was considered by the Secretary of War, the Secretary of the Interior, and the Secretary of Agriculture under their separate powers prior to the enactment of this bill dealing with water powers on navigable streams in the public forests and on the public lands in the whole history of their jurisdiction over that subject. In other words, since this bill has been passed applications for five times as much development have been filed with the commission as the three separate departments previously considered in the entire history of their jurisdiction of water-power development, and under the terms of the water-power bill the things which it is now necessary to ascertain for the protection of the public interests and for the regulation of this great use of power are so very much more detailed, so much more specific and intricate, that Mr. Merrill roughly estimates that with regard to any application it is now necessary for us to know five times as much as previously the Secretary of War, the Secretary of the Interior, or the Secretary of Agriculture would have been required to know before acting upon a permit filed in his department.

The War Department, the Interior Department, and the Agricultural Department all have a limited expert personnel. They have all sought to be generous with the power commission in the detailing of personnel to assist them in this work, but no one of them nor all three of them have been able adequately to supply the commission with expert personnel, and the feeling on the part of the commission is that we ought to be permitted in cases where, for instance, the War Department has no district engineer within accessible distance, or the Interior or the Agricultural Department has no expert investigator, that we ought not to hold up a project because of the inability of those departments to detail a man, but that we ought to be permitted to select a suitable expert and send him out to make the survey necessary. It is a supplement rather than a substitute that we are seeking in this bill.

We went before the Appropriations Committee—a branch of the Appropriations Committee—and asked them to make an appropriation for the power commission of a larger sum than was ultimately recommended by the committee, and suggested that they put in a withdrawal of the limitation in the same act upon expenditure for the employment of personnel. They said that would be legislation and would be subject to a point of order, and they declined to do it but told us to come here and lay the case before you and that if your judgment ran with theirs, as they expressed it, and with ours and you changed the law they would then supplement the appropriation and make adequate provision for that employment.

The CHAIRMAN. We would have to do that in a deficiency appropriation.

Secretary BAKER. It would have to be in a deficiency appropriation, in all likelihood.

There is one other aspect of it that I would like to speak upon, and then I will have covered all that seems to occur to me voluntarily. The organization of the Federal Power Commission is attempting to do in anticipation—and therefore we think with very great economy and great safety—what the Interstate Commerce Commission was

obliged to do in retrospect after things had gotten into a great tangle. If at the time the railroads were developing in this country anybody could have foreseen the problems the Interstate Commerce Commission would have subsequently had to deal with, they could have provided systems of accounting, bookkeeping, statistical records, and all that sort of thing, which would have obviated enormous expenditure and no great bewilderment both on the part of the public and the official minds in dealing with the railroad problem.

We are now just at the outset of the development of hydroelectric power. The commission has felt that it ought, as far as human foresight can go, to surround that development with all of the systems of records and statistics and accumulations of information that will make the continuous administration of that as a public function easy and inexpensive. To that end, of course, it was necessary that we should have a thoroughly scientific system of accounting from the very inauguration of these enterprises.

Under the bill as it is now drawn there is no authority in the commission to employ a public accountant to advise it how to set up its accounts. We are authorized to have an engineer officer detailed from the War Department and to employ an executive secretary, but outside of that I think we are entitled to spend no money for employees of any sort. We do not have anything to spend on the details there, so it has been necessary for the War Department to—with deference to Mr. Smith—I do not say break the law, but, well, bend it—well, we did this: the office of the chief of engineers, by my direction, employed a public accountant and gave him a titular relation to some sort of accounting problems in the office of the chief of engineers, and then detailed him to the Federal Power Commission in order that he might act there as an expert in setting up a system of accounting for the control of these enterprises.

It will be necessary for us to have the advice of hydraulic engineers, construction engineers, expert accountants and many different kinds of persons in dealing with this new and vast problem, and the purpose of this amendment is, within the limits of the appropriations made by Congress, to free the hands of the commission to secure such assistance as it may need to supplement that which it can procure from the three great public departments.

That covers the whole subject as I care to discuss it, with the exception that I have personally and with the concurrence of my two associates, recommended that there be included in the second of these bills a provision that enlarges the maximum salary which can be paid to the executive secretary. We put that in without consulting Mr. Merrill. I do not know that he had any opinion about it one way or the other, but we put it in because of Mr. Merrill's very long association with these problems and the practical impossibility of retaining his services or securing an adequate substitute for the limited amount which was previously put in for an executive secretary.

Mr. RAKER. Is it your view that you can not go into either of these departments and bring out any of these experts in the Department of War, Interior, or Agriculture under this bill?

Secretary BAKER. You mean under existing law?

Mr. RAKER. At the present time.

Secretary BAKER. Under existing law we are permitted so far as they can be spared, but you see it is made the duty, for instance, of

the Secretary of War to detail such clerical people as he can afford to get along without, and these are contracting days and it is very difficult—the War Department has reduced its clerical personnel from 36,000 to something less than 10,000 now, and every department in the War Department is crying for more clerks and getting less.

Mr. RAKER. There has been so much said lately about there being a surplus in all these departments, and I am pleased to have you explain that as a matter of fact you have not so many that you can get hold of.

Secretary BAKER. As a matter of fact, sir, the comment on the War Department—I have not observed it as to others—the comment on the War Department in that regard has abated somewhat within the last two or three months. I think those who have examined the matter have found that the War Department has reduced its clerical personnel to almost a minus minimum.

The CHAIRMAN. Mr. Secretary, in view of the fact that the construction of a water power project can not be undertaken until the Power Commission makes a preliminary survey and makes even a survey of the water power possibilities of a region, all work must be delayed until you can get a sufficient personnel to make those preliminary investigations. Is that right?

Secretary BAKER. Yes.

The CHAIRMAN. So that this legislation is necessary if the act is to function?

Secretary BAKER. Surely.

The CHAIRMAN. Let me call your attention to a matter which might give rise to trouble, the last part of page 3, line 19, which says: "there is hereby authorized to be appropriated such sums as Congress may hereafter determine." That is all right. That is the authorization. This committee has jurisdiction as to authorizations, but to go on and say: "and the sum of \$100,000 is hereby appropriated out of any money in the Treasury not otherwise appropriated," and so forth—don't you think that ought to come out?

Secretary BAKER. That ought to be stricken out of the bill.

The CHAIRMAN. I think so. Of course, you know the sundry civil bill carries \$100,000.

Secretary BAKER. The reason that is in here, Mr. Chairman, is that Mr. Merrill in drawing it simply drew the original section and stuck this in as an amendment. That was part of the original section and it is not intended to appropriate an additional \$100,000.

The CHAIRMAN. You can see that under the new rule of procedure in the House that would be subject to criticism and objection.

Secretary BAKER. That ought to go out.

Mr. ELSTON. It is necessary to have an authorization of law. The language could be made in the way of an authorization, but that appropriation of \$100,000 should be eliminated. If it failed in the appropriation act, you would have an authorization for it at a later time, so it might be well to carry the authorization.

The CHAIRMAN. Mr. Merrill probably can inform us on that.

Mr. RAKER. There is undoubtedly a lot of very valuable material gathered in the War Department, the Department of the Interior, and the Agricultural Department in regard to water power, in the way of books, manuscripts, plats and so forth. Under the law can you have that transferred to your department without any additional authorization?

Secretary BAKER. Its transfer would be undesirable. It is inseparable, largely, from the other interests in those several departments which led to its collection. In the War Department, for instance, the question of navigation have led to the investigation of all these rivers, but our practice—and it will be the continuing practice undoubtedly under any form of law—is to have the applications inspected in the several departments with a view to any information they have there. For instance, any application for the flow of a river would instantly send our Secretary over to the War Department, to the chief engineer's office, to find out all they knew about that river. That information is all available and can not be duplicated.

Mr. RAKER. And the same with regard to equipment, supplies and law books and reference books, books of reference, periodicals, and so forth, your view is that it would be necessary to accumulate those that would be applicable to this branch, namely, water power in all its phases, rather than to try and get those that the other departments have?

Secretary BAKER. I think the current literature on water power development ought to be available in the office of the executive secretary, and a very limited law library would be necessary for legal advice.

Mr. RAKER. There really would be no duplication, then?

Secretary BAKER. I think not; no.

Mr. SIMS. Mr. Secretary, I happen to have the honor of being the first chairman of the special Committee on Water Power, and I suppose had something to do with and gave considerable attention to the details of it. This question of the executive secretary and salary of course was discussed and considered from every viewpoint. There is no question in my mind that the executive secretary should be a very competent man, and on the other hand there was the suggestion that if he were too competent it might bring about a disposition on the part of the three secretaries, having so much work to do outside of the commission, to rely too much upon the one very competent man. But I can see the trouble and it has come up, no doubt, under your own observation, that we can not expect an exceedingly competent man to work for the Government always at starvation wages, when the very people who are directly to become the beneficiaries of the service are willing to employ him, if he will resign and take the employment, at a very large compensation compared to that which he is receiving.

In discussing this matter there was no disposition at all to minimize the services of the man who we then guessed would be—or that we supposed would be—the executive secretary, which has turned out to be a correct guess, but those questions arose, and it is a very large question, because men are quitting the public service all the time because they could get more money to serve a corporation or individuals in private business who have the responsibilities of family and all that sort of thing on them. Now I think that the secretary's salary in this case, in view of the great responsibility that he has to have, that he must have, that he ought to have, ought to be such that he could afford to hold that office just as long as he served the public; but I do not know how soon some private corporation who

needs that expert service will come in and outbid the Government. I do not know what we are going to do in that kind of a situation.

Secretary BAKER. I do not know the compromise, Judge, between the retention and the loss of valued public officials. I do not know how the Government is ever going to be able to keep men. That is what is happening all the time; they become competent and are drafted into outside employment where the compensation is greater, and obviously there must be a limit beyond which the Government can not go in that competition.

Mr. SIMS. But men are leaving the public service all the time.

Secretary BAKER. Of course.

Mr. SIMS. To go out and do for a private employer that which they were doing for the whole people.

Secretary BAKER. Exactly.

Mr. SIMS. But the whole people did not value the services sufficiently to give a living wage, and in an instance of this sort, without any regard whatever to the personality of the present executive secretary, the man who is acquiring the knowledge which the executive secretary of the power commission ought to have as to the location and value of sites for hydraulic power development, will have in his head an asset that is bankable at a very large figure if some private company wants to get him.

Mr. McLAUGHLIN. In the water-power act is this secretary called the "executive secretary"?

Secretary BAKER. Yes.

Mr. McLAUGHLIN. I remember that matter was spoken of when the bill was under consideration, and there was some objection to the use of the word "executive." I did not recall whether it was retained in the act or not.

Secretary BAKER. It was retained. He is officially "executive secretary."

Mr. SIMS. Not speaking outside—I mean not giving out secrets of the committee—I objected to it myself, but not particularly on account of this special employment. It looked to me that we might begin the practice of having executive secretaries in every department at a salary much above the ordinary secretary and that it might possibly lead to the creation of such secretaryships in all of the departments, and I did not think the word "executive" would add anything to his qualifications to serve or be an inducement for him to be a better officer, and it looked to me that it was an unnecessary designation.

Secretary BAKER. I should think, Judge, that the reason for it would be in this case that you have three members of the commission; they commonly execute their functions through a common secretary who is the executive secretary of the commission. Where you have a single head of a department, to have an executive secretary there would be a surplusage, because the head of the department is himself the executive secretary.

Mr. SIMS. The committee took that view of it.

The CHAIRMAN. I think I was responsible for the amendment which designated the secretary as the "executive secretary," for the reason that Secretary Baker has just referred to, and with the hope that that title might beget a larger salary. You think that the title might well be amended, Mr. Secretary, by adding "and for other purposes"?

That has been suggested. It is a common form of law and I think probably ought to be put in this bill.

Secretary BAKER. Yes, I think it helps in the interpretation of the act sometimes.

The CHAIRMAN. Are there any other questions? If not, we are very much obliged to you, Mr. Secretary, for your views.

Secretary Meredith, we will be glad to hear you on either one or all three of the bills.

STATEMENT OF HON. EDWIN T. MEREDITH, SECRETARY OF AGRICULTURE.

Mr. MEREDITH. I do not know, Mr. Chairman, that I have anything in particular to add. I wish, however, to indorse most heartily what Secretary Baker has said regarding personnel and the ability of the commission to conduct its work more efficiently and effectively with a force of its own instead of having to depend upon employees detailed from the three departments. The secretary of the commission recently asked us to assign an employee who, in his opinion, was especially qualified for the work of the commission. After going into the matter thoroughly, however, we found that we could not spare him from the task upon which he was engaged without serious detriment to the service. We tried in every way to meet the wishes of the commission, and finally a satisfactory arrangement was made after the lapse of several weeks. It does not seem to me that a situation of this sort tends to give the commission the best personnel or to enable it to measure up to the responsibilities imposed upon it in such an important matter as the handling and development of our water-power resources. So I merely wish to emphasize all that Secretary Baker has said regarding personnel.

On the question of the national parks, I feel, as the other secretaries have expressed themselves, that the parks belong to the public as a whole, and that the public should have notice whenever there is a proposal to utilize the parks, or any portion of them, for purposes other than those for which they were originally created. It does not seem to me that such a provision would necessarily, in all cases, prevent the utilization of some features where no harm would come from it. If a bill providing for a certain concession were introduced, the committee to which it is referred could ask for a report, and probably would ask for a report, from the water-power commission. The commission would make a report for or against the proposal and this report, together with the record of the hearings on the measure, would enable the proper congressional committee to make a report to Congress that, it seems to me, would be more or less conclusive and certainly would have very great weight with the whole membership. If it were concluded that the project would result in no particular harm to the park, that it provided for developments which would probably never be seen by visitors, that it would not spoil the waterfalls, etc., Congress then would be in position to pass upon the matter and the larger interest of the public in the parks would be fully conserved.

Personally, I do not feel that no use whatever can be made of a park without ruining it for park purposes, but, on the other hand, I do feel that we should take no chances and that the benefit of the doubt should be on the side of preservation rather than on the side

of utilization. So I concur in what the other secretaries have said regarding that feature of the law.

The CHAIRMAN. What are your views as to the boundaries, the operation of the bill as to the boundaries, the limits now existing?

Secretary MEREDITH. It seems to me that such matters could be discussed when any proposal to enlarge the parks is under consideration. That would be the time to present objections to any particular boundary because of the fact that it comprises certain possibilities for water power, irrigation development, etc. The questions involved could be thrashed out at the time and Congress could take such action as the facts in each case may warrant. In other words, it seems to me that whole matter could be dealt with in a thorough-going manner when the boundaries are being discussed and before a determination is reached as to whether this or that area should be included.

The CHAIRMAN. Are there in the Departments of Agriculture, Interior, and War experts along the line of accounting, experts along the line of hydraulic engineering or hydroelectric power development that you could put into the personnel under the power commission? Or should they have the means to develop a personnel distinctly under the Federal power commission?

Secretary MEREDITH. That is, by taking them from the three departments?

The CHAIRMAN. Can you do it or have you got to create a personnel practically of outside talent?

Secretary MEREDITH. I think there might be some available. Mr. Merrill has, no doubt, made a canvass of the different departments with a view to seeing who might be available for detail to the commission, and I imagine there are some men who could drop their work in a particular department.

One of our troubles is the lack of funds. If we employ men for particular purposes in the Department of Agriculture, and then find that we must detail them to the water-power commission, the work upon which they have been engaged is curtailed and handicapped. In other words, we are merely curtailing the work of the three departments by these details, while, if the employees concerned were transferred outright to the commission, we could then secure others to take their places and both the commission and the department would get along without handicap.

Mr. RAKER. Mr. Secretary, I can not quite understand what you mean about this personnel. If, as a matter of fact, the water-power commission has the right to draft anyone in your office——

Secretary MEREDITH (interposing). I do not so understand.

Mr. RAKER. Now that is just what I wanted to know. Where do you get that idea?

Secretary MEREDITH. The commission can ask us for a man and if we can spare him we may do so; but if we say, "No, that man must stay with us," the commission can not order his detail.

Mr. RAKER. So it is your view that the water-power commission does not have the right to select anyone they want from either of these three departments and put him to work in the water-power commission?

Secretary MEREDITH. Oh, no, unless we authorize his detail to the water-power commission.

Mr. RAKER. Where did you get that idea? I don't find it in the law, and when we put this in, we put it in with that very purpose in view. I am asking you now because there has been a good deal said about an overplus of personnel. Now if you have that personnel in these departments, it is none of their business where they are transferred to. If they are competent and qualified men, this power commission has the absolute power, as I thought the law provided, for them to select any man in any of the three departments and put him to work under the water-power commission.

Secretary MEREDITH. I do not agree with that. That is not the way we understand it. It certainly would be an ill-advised requirement, would it not, to let Mr. Merrill, for instance, as executive secretary of the water-power commission, take any employee he desires from any of the three departments, or to let two members of the commission, for instance, outvote the third member and say to him, "We want to take your entire legal department and walk off with it?"

Mr. RAKER. Mr. Merrill could not vote on that.

Secretary MEREDITH. But the other two members could. Suppose that Secretary Payne and I decided that we wanted to detail all the employees of a particular branch of the War Department to the water-power commission because we needed them. Secretary Baker's hands would be tied under your interpretation of the provision, and I do not believe Congress intended to create or make possible a situation of this sort. On the contrary, it seems to me that its purpose was to authorize details to the commission with the approval of the head of the department concerned.

Mr. RAKER. Hasn't there been a sufficient number of personnel in your office that you could pick out any of these men?

Mr. MEREDITH. Absolutely not. We haven't a sufficient force in my office to do all the typewriting and clerical work that is required.

Mr. RAKER. Where does all this talk come from then, that the departments are honeycombed with extra men and women that are doing no work and that you can get all you want for any other purpose?

Secretary MEREDITH. You can judge for yourself where the talk comes from, but I do not think there is any real basis for it so far as the Department of Agriculture is concerned.

Mr. RAKER. Then there is nothing in it?

Secretary MEREDITH. There is nothing in it so far as I know.

Mr. RAKER. Let me ask you this question—I don't say I agree entirely with you; I don't know—when this matter was discussed before the committee in the hearing fully and we spent possibly six weeks on it, the committee itself, I believe, thought that this provision in the bill gave this commission the power to go to either of these departments and select a competent and qualified man that had made good in that department and put him to work in this water-power commission's work, and we thought we covered it, but even if we have under the law, your theory is that the men are not there?

Secretary MEREDITH. They are not, sir.

Mr. RAKER. Then under this bill, 12651, these people would be classified under this power without civil service. Isn't it your view that the bill should be amended that all of these appointees should be under civil service?

Secretary MEREDITH. I would imagine so, yes; the same as the other departments.

Mr. RAKER. In other words, it would harmonize them with the rest, and the bill ought to be amended so as to require these appointees to come under the civil service.

Secretary MEREDITH. Yes, sir.

Mr. BARKLEY. Mr. Secretary, even where you have men that you may transfer to the water-power commission, that transfer may be more or less temporary and in that way there is a lack of continuity of personnel in the Federal Water Power Commission, is there not?

Secretary MEREDITH. We have not been in operation long enough to know. I imagine that would be the result. In any event, there is a lack of permanency; there is a lack of definiteness and responsibility. An employee on detail may say, "I am employed in the Department of War or Agriculture or Interior, and I am only detailed over here." He doesn't know whether he is there permanently or how long he will remain. I do not think any other institution would have an arrangement whereby it is necessary to borrow employees here and there in order to execute an immensely important task. It seems to me that the commission should have its own organization that will be responsible to it and to it alone. That, in my opinion, is the only business way to do.

Mr. BARKLEY. With reference to the amendment suggested by Mr. Raker about the civil service, do you think the most competent hydraulic engineers can be obtained by a competitive civil-service examination?

Secretary MEREDITH. I do not say that the most competent can be obtained. I do not believe, however, that a competent engineer would object particularly to taking the civil-service examination and it would be no difficulty for him. I think there is an advantage in the civil-service, but I do not profess to be an authority on such a matter. Mr. Merrill has had more experience along that line and is better qualified to speak on the subject.

The CHAIRMAN. There probably is no surplus of experts in any of the departments.

Secretary MEREDITH. There is not in the Department of Agriculture.

The CHAIRMAN. Nor in the others, perhaps. So this surplus is probably more confined to the clerical branch than to the expert branch.

Secretary MEREDITH. I beg your pardon; I did not understand you.

The CHAIRMAN. I say this surplus that has been mentioned probably has more reference to the clerical department than to the department of experts, and you want experts to develop this personnel of the power commission.

Secretary MEREDITH. Well, even in the matter of clerks we have had occasion to write, say, 250 letters, similar letters to a list of names, and we have been compelled to scatter the work among several different bureaus in order to get it done within a reasonable time. I have had a number of experiences of this sort—experiences which I would not permit in my own office; I would have enough people there to do the work without waste.

Mr. McLAUGHLIN. This contemplates a permanent personnel of experts, I presume?

Secretary MEREDITH. Yes, sir.

Mr. McLAUGHLIN. And that is what the commission wishes?

Secretary MEREDITH. Yes; the commission ought to have a regular force which would be responsible only to it and upon which it could depend for the discharge of its duties. It will also need outside advice from time to time. It may require the services of a particular man for this purpose or that purpose, who will not need to be engaged regularly, but there certainly should be a skeleton organization with enough men to make the examinations and perform the functions required by the law. But I really feel that Mr. Merrill, who has had long experience in the Forest Service in connection with water-power matters, can give you more concrete information regarding the number of experts and other employees the commission needs.

Mr. McLAUGHLIN. I am not entirely familiar with the language ordinarily used in a matter of this kind, but I had in mind just what you, Mr. Secretary, have said, that you contemplate the employment of a permanent force, and I was wondering if the language "is hereby authorized to be appropriated such sums as Congress may hereafter determine" did not imply a more or less temporary force to do on a large scale what you say may be done, the employment of an expert for the time being, and then the employment of somebody else.

Secretary MEREDITH. I do not have the details in my mind, but I see no necessity for using the word "permanent." Why not employ a force that is necessary for the conduct of its business; then it may be temporary or it may be permanent, depending upon the work to be done.

The Chairman. Would you have any objection, Mr. Secretary, to putting in line 14 the words "under the civil-service law?" So that it would read—this is on page 2—"authorized to employ in the District of Columbia and elsewhere such experts, technical, clerical, and other personnel," then say, "to be selected under the civil-service act, as may be necessary for the purpose of performing the duties imposed by this act," and so forth.

Secretary MEREDITH. Personally, I would have no objection to it. I have not heard the question discussed, however, and there may be some reason why it might be objectionable, although none occurs to me at this time.

The CHAIRMAN. You would have no objection if it were applicable to clerical and other personnel?

Secretary MEREDITH. Not at all. It ought to be.

The CHAIRMAN. Are there any other questions? If not, we are much obliged to you, Mr. Secretary, for the expression of your views.

Mr. PIERCE. Mr. Chairman, I am obliged to leave Washington on an early afternoon train, and I would greatly appreciate being heard.

The CHAIRMAN. We will hear you now, then. Give your name and address and whom you represent.

**STATEMENT OF MR. HENRY J. PIERCE, SEATTLE, WASH.,
PRESIDENT OF THE WASHINGTON IRRIGATION & DEVELOPMENT CO.**

Mr. PIERCE. My name is Henry J. Pierce, of Seattle, Wash., president of the Washington Irrigation & Development Co. I wish to

address myself first to House bill 14469. I desire to suggest an amendment to this bill which is now under consideration.

The bill as now before you would forbid the utilization of the water resources contained not only within the present boundaries of the national parks and national monuments but also within any enlargement of their boundaries. While there are some water resources contained within the present boundaries of the parks which could be used to advantage to supply the people of near-by localities with power and with water for irrigation and domestic use, yet the greater part of the water resources of the mountainous sections of the Pacific coast are contained in areas outside the park boundaries.

The people of the Pacific Coast States, and especially of California, view with apprehension, however, allowing the terms of this bill to apply to the great areas which are comprised in the proposed additions to the national parks. The proposed enlargement of the Sequoia National Park, for instance, would take in the headwaters of the Kings, Kern, Kaweah, and San Joaquin Rivers, comprising water resources which will be absolutely necessary to the future growth of central and southern California. This water will be needed in the future by the people living on the plains below for irrigation, agricultural and domestic purposes, and for the production of hydro-electric power to furnish light, power, and heat, and there may be still further and larger additions to be made to the national parks in the future which, with the use of the water resources which they contain forbidden, would seriously handicap if not prevent future growth.

We people of the Pacific Coast States, Mr. Chairman, love and reverence the natural wonders contained within our national parks and monuments, perhaps even more than those who dwell in other parts of the country. We are proud that these great natural museums are located in our part of the country. We would take up arms, if necessary, to prevent their desecration. We are in sympathy with the splendid and unselfish work which is being performed by Mr. Mather, director of parks, and by his bureau in protecting these treasures from destruction. But we ask not to be denied the right to use the water which may become necessary to the further growth of population on the Pacific slope. I believe that the water resources contained within the proposed enlargement of the park boundaries may be utilized for the needs of mankind without damaging the beauty of the surroundings.

I respectfully suggest, therefore, that the bill be amended so as to restrict its operation to the present boundaries of the parks. This can be done by inserting after the word "limits," in line 7 of page 1, the words "as now constituted," and by inserting in line 4 of page 2, after the word "of," the word "existing." If this is done, I shall be greatly in favor of the bill.

Mr. RAKER. Where does the second amendment come in?

Mr. PIERCE. The second amendment is in line 4 of page 2, after the word "of," insert the word "existing."

I take it, Mr. Chairman, that from what Secretary Payne has said he would not object to this amendment, and if I may I would like to ask Mr. Mather if he understands it that way.

Mr. STEPHEN T. MATHER. That is my understanding of the Secretary's attitude. We went over this suggested amendment in our

own office with two of our officials of the National Park Service, and then took the matter up with Secretary Payne, and I think he has already indicated to-day that an amendment of this kind would not be objectionable to him.

Mr. SINNOTT. So it is agreeable to confine the limitation to the present parks?

Mr. MATHER. Yes, sir; letting the other matters come up in connection with these specific bills for the creation of other parks or forest additions to the present parks.

Mr. SINNOTT. Well, I don't understand that. You mean to leave the matter to Congress in additions to the parks, or leave the matter to the commission?

Mr. MATHER. Leave it to Congress, which could in its discretion leave the matter of power in any future parks either to Congress itself or to the power commission. That would be a matter to be taken up as each specific bill came up.

Mr. RAKER. In other words, if they added a million acres to the Mount Lassen Volcanic National Park, if the amendment suggested by Mr. Pierce was adopted, Congress would determine in that additional legislation as to what its policy would be as to the development of hydroelectric energy in that park?

Mr. PIERCE. Exactly so.

Mr. SINNOTT. And in case Congress did not act on that matter, the matter would be left in the power of the commission, under Mr. Pierce's amendment.

Mr. BARKLEY. Now, I don't know whether it would or not.

Mr. MATHER. I did not get Mr. Sinnott's question.

Mr. SINNOTT. In case Congress did not prescribe terms for some addition to the park, then the matter would be left to the commission, under Mr. Pierce's amendment to 14469.

Mr. MATHER. If Congress was silent, I think your construction is correct.

Mr. SIMS. If the amendment goes in, then that exempts national parks as the boundaries are now declared and fixed?

Mr. PIERCE. Yes; Mr. Sims.

Mr. SIMS. That is, if there is any water-power development in a national park as the boundaries now exist, it would take an act of Congress to permit it, in addition to the powers of this bill?

Mr. PIERCE. Yes, sir.

Mr. SIMS. But on all other public lands, applications can be made immediately under the act and the work started?

Mr. PIERCE. Yes, sir.

Mr. SIMS. Now, then, if Congress afterwards shall determine to extend the boundaries of a national park or create a new one, that would contain these applications where this work was done, then Congress would not have the power to stop that or prevent it, but would have to let it go on, because it has become a vested right.

Mr. PIERCE. I should say so.

Mr. SIMS. That is something; it seems to me, that we ought to think a little about before we decide it. It has been admitted here that there are lands that ought to be in national parks that are not in, and if you or anybody else should go there and make application and

have license granted, then you would have a vested right and Congress could not make a park of it without compensating you.

Mr. RAKER. That will be provided for, that very contingency, in this bill, in section 28. Until the man has actually acquired a right, not an inchoate right, Congress can alter, repeal, or dispose of it as it sees fit.

Mr. McLAUGHLIN. Are you quoting from the law, from the water-power act?

Mr. RAKER. From the water-power act, yes. It has the right to alter, amend, or repeal this act. In other words, until the man has got an absolute title Congress has got the right to dispose of it.

Mr. SIMS. When a permit issued to him he has a privilege under the permit, and then if his license is approved he has a vested right.

Mr. ELSTON. Of course, that would mean that every area outside of the boundaries of existing parks under that construction might be considered as possible park area, and if that rule were invoked there would be no area whatever that could be used for water-power sites under the present bill, and of course that would defeat the very purposes of the bill, if you regarded as possible park area any area outside of an existing park. The amendment, of course, means that later on, if Congress finds an area that is untouched by vested rights granted under the water-power bill, and that area is favorable for parks, then Congress can create it into a park and at that time it has the right to say whether or not the water-power commission will have any jurisdiction over it at all. It seems to me the amendment of Mr. Pierce is not needed, because it is not assumed that will ever arise. Of course it can arise by power of Congress setting aside lands in the future, so why say anything about it?

Mr. RAKER. And the further condition would exist, would it not, Mr. Pierce, that if additional territory was added to one of the parks, in which a permit was granted and completed, and it was set aside as a park, that one permit would stand in operation, but all the rest of it, if Congress said no more would be granted, it would be a law and therefore there would be only one permit in that park and no further development would be made. Is that your view?

Mr. PIERCE. Yes, sir.

Mr. BARKLEY. Under the bill as it now reads, it would apply to present parks and any additions or any new parks that might be created?

Mr. PIERCE. Yes, sir.

Mr. BARKLEY. So that hereafter the whole parking system of the United States would be subject to special consideration by Congress, dealing with any individual project that was under consideration, but if your amendment is adopted you will have part of the national park system that is subject to special action by Congress and another part of the national park system which may be dealt with by the commission. You might have one portion of a given park which Congress could alone deal with and another portion of the same park that the commission could deal with. Doesn't that give rise to confusion and contradiction and duplication on the part of the commission and Congress. Where is the objection to allowing this general law to apply to all the parks, and then hereafter if the situation arises that needs special treatment allow Congress to do that, rather than to exempt all future parks now, so that if Congress in

creating it wants to put it under the general law it must affirmatively do so in order to bring it in?

Mr. PIERCE. I think that should be considered at the time the parks are enlarged; that is, when the question comes up before Congress as to the enlargement of the parks, or the creation of new ones.

Mr. BARKLEY. But your amendment will not prevent that special consideration if Congress wants to exempt the addition or the new park from the provisions of the general law. Congress can still deal with it separately by taking it out from under the provisions of the general law and allow the commission to deal with it separately.

Mr. PIERCE. I suggest this amendment in the desire to secure harmony in this matter. I am in favor of this bill, but I know that unless its operation be restricted to the present park boundaries, the present areas, it is going to meet with opposition on the part of some Congressmen and Senators, because the proposed park—

Mr. BARKLEY (interposing). That is a matter that may develop during the consideration of the bill on the floor, but if there are enough Members who want to put in an amendment of this sort, then it will be put in.

Mr. PIERCE. But I am sure that if the amendment which I suggest were adopted there would be no opposition and that the bill would be passed.

Mr. BARKLEY. The thing that appeals to me about it is not the matter of expediency, whether it meets with opposition or not, but whether it is right and wise as a policy.

Mr. PIERCE. Proposed enlargement of present park boundaries, as I have said, contain water resources which are absolutely needed for the future growth of California. I am sure I speak for most of the people of the Pacific slope when I say that much as they desire the passage of this bill which you have under consideration, they would object to it unless it were restricted to the present park boundaries.

Mr. SIMS. Which do you mean, the general public or the men who have interests there?

Mr. PIERCE. The general public, because, Mr. Sims, we of the Pacific coast are absolutely dependent upon the water of the Sierra Nevada Mountains and the other mountain ranges of the Pacific slope for our very life, our existence and our growth. Let us confine the operation of this bill to the present boundaries of the parks. That can be safely done, and then when the question of the enlargement of the park boundaries comes up, let Congress decide as to whether they will put this same requirement upon the enlarged boundaries.

Mr. BARKLEY. As an evidence of the fact that Congress is not at all unmindful of that situation, two years ago it passed a bill applying to the Hetch Hetchy project, which supplies water, I believe, now to San Francisco.

Mr. PIERCE. Yes, sir.

Mr. BARKLEY. And it seems to me that it would be better to have not only all the parks that now exist but all the future parks that may be created under one general law, unless in the creation of some particular park the situation is so exceptional that Congress would take it without the jurisdiction of Congress and leave that power in the hands of the commission.

Mr. PIERCE. I am sure the people of California feel that unless the operation of this bill were restricted to the present park boundaries, it would threaten the future growth of their State because the park boundaries might be enlarged to take in water resources absolutely necessary to the existence of increased population. So I suggest, in the interest of harmony, and because I want to see this bill pass, that we confine this question to the situation as it exists at the present day and to the present park boundaries, and then I don't believe there will be a member of Congress who will object to it.

Mr. McLAUGHLIN. What difference does it make? You take some of these areas that may later be put into the national parks; they are open now, and those who wish to file on them can do so and gain rights that can not be set aside by subsequent action of Congress. Isn't that true?

Mr. PIERCE. Yes, it is true.

Mr. McLAUGHLIN. What more do you want?

Mr. PIERCE. The people of the Pacific coast, unless the operation of this bill were restricted to the present boundaries, would feel that they would have to oppose the bill.

Mr. BARKLEY. In other words, they do not believe that Congress in the future in creating parks would take care of this situation?

Mr. PIERCE. They might not.

Mr. SMITH, of Idaho. I think, Mr. Pierce, your idea is that it would sort of serve notice on Congress that while we are satisfied to have the water power law apply to the present parks, we would not be willing to have it apply to parks that may be hereafter created, unless there is a reservation that the water powers may be used.

Mr. PIERCE. I think so. I am sure, for instance, that the proposed Roosevelt Park for the establishment of which there is a bill now before Congress, contains water resources which are absolutely necessary to the future growth of central and southern California, and the application of this amendment to that area would be strenuously opposed by the people of California.

Mr. BARKLEY. If this amendment that you suggested were not adopted and the law applied to all parks, present and future, and then at a later date Congress should establish the Roosevelt Park, would it not be an easy matter, if it was demonstrated that there were water powers within that proposed park necessary for the sustenance of life and agriculture in southern California, for Congress to provide in the act creating the park that it should not be subject to the general law, but should be subject to control by the water-power commission?

Mr. PIERCE. It would be possible, but the people of the Pacific coast are willing that the water resources of these parks as at present constituted should be withdrawn from use, but not those in the enlarged boundaries.

Mr. BARKLEY. It is conceivable that there may be future parks created that will have no water power in them.

Mr. PIERCE. Yes; or if they do have water power it will not be of such exceptional value as to be treated in that way.

Mr. BARKLEY. In that case Congress would have to affirmatively say in the law that that park should be under the control of Congress and not of the commission. Now wouldn't it be easier for Congress to take a given park out of the jurisdiction of Congress where there

are exceptional circumstances than it would be to put affirmative provisions in every park law providing that it should be within the discretion of Congress?

Mr. PIERCE. I think that question should come up at the time the boundaries of the park, are proposed to be enlarged or new ones created.

Mr. SIMS. Suppose your amendment is not accepted and what I will call the Payne amendment is adopted, then under the Payne amendment no water power can be established in the parks as now laid out?

Mr. PIERCE. No.

Mr. SIMS. Without action of Congress?

Mr. PIERCE. No, sir.

Mr. SIMS. But they can establish on all the rest of the public lands anywhere. Now why do you wish that right emphasized by your amendment?

Mr. PIERCE. I do not think the water resources contained within the proposed enlargements of the parks are immediately necessary to California, but they will be as the country grows.

Mr. SIMS. They are open right now if they are; now why do you want to put an amendment in in addition to that when they are already in the water-power bill?

Mr. PIERCE. Well, sir, I know I voice the sentiment of the people of California in saying that they think this amendment should be restricted to the present park boundaries.

Mr. BARKLEY. They are not very enthusiastic about it even as to that, are they?

Mr. PIERCE. Well, they are willing the amendment should pass if restricted to present park boundaries. The water is necessary to their very life, as you know, if you have traveled out there.

Mr. RAKER. The people of California are very enthusiastic in regard to maintaining the integrity of the Yosemite National Park as it is.

Mr. PIERCE. Absolutely.

Mr. RAKER. And there is not 1 per cent of the people of California who would in any way do away with it, with its beauty and the utilization of the park for that purpose.

Mr. PIERCE. Absolutely not.

Mr. RAKER. Now for the benefit of creating additional territory in the parks that might be necessary, and wouldn't your amendment have this effect, namely, it would make the creation of the park easier, because those territories wherein you could use it for water-power purposes, the parties would have the opportunity to be heard?

Mr. PIERCE. Yes.

Mr. RAKER. And the matter could be fully explained to the Congress, so that if it was necessary they could make the proper provision in the bill, an affirmative provision, that no more development should be made.

Second, while this is being done, while there is no park created and none added, it will open a full development to that territory and allow men to go in without the fear that they are going to be deprived of their rights if they start in.

Mr. PIERCE. Yes, sir.

Mr. RAKER. So, as a matter of fact, if your amendment goes in it is to define the rights of water power development, but primarily if we want to add any part, it gives all a full opportunity for a hearing.

Mr. PIERCE. It does.

Mr. ELSTON. Mr. Pierce, do you reside in California?

Mr. PIERCE. I reside in Seattle, Wash.

Mr. ELSTON. You are speaking very strongly of the sentiment in California, as if you represented it, and I rather think that the people are not as aroused over the question and have not expressed themselves so definitely as to warrant the statements you make. I have lived there all my life I was born there and I am pretty well acquainted with the sentiment, and I think the people are very much against—would be very much against the use, for instance, of the floor of the King's River Canyon for power purposes, for flooding it as a reservoir. I think they would be very much against the use of the floor of the Kern River Canyon. I think that on the whole the sentiment would be in favor of the inclusion of those two great canyons, which are comparable to the Yosemite, and in some aspects grander than the Yosemite, in the national parks, but I do believe they would be against any ring thrown about those two canyons with the statement that they are hallowed ground and that hereafter no use whatever could be made of the tremendous water powers there, consistent with the use of those valleys for park areas.

In other words, there is nothing sacred and shall be nothing sacred about those areas if later on when the great needs of California come for water power and so on, some modified use, adjusted use could be made of those great water powers consistent with park purposes, modifying to some extent the full extreme of the use of those valleys for park purposes, not to the extreme, of course, of flooding those two valleys. Now that accords with my opinion. As a park enthusiast I would hate to be drawn to the extreme of saying that California eventually, when it has ten or fifteen million people, shall never touch the great resources of those great rivers which comprise practically the only source of water power and irrigation for the whole of the San Joaquin Valley and for Southern California. So I think that when you state that the people of California are against any inclusion of those areas in the parks, you are speaking a little strongly, but I am speaking now of the use of those as a thing in the future; I would hate to see that thing stamped now as hallowed ground which nobody can touch for all time.

I think it would be a great mistake. To that extent I am rather in favor of your suggestion for the reason that I think it would facilitate the passage of acts creating and enlarging—I mean creating new parks and enlarging present boundaries, because if the amendment is not passed I think we will have rather difficult sledding in getting new additions to any parks. I am the author of the Roosevelt bill and I know.

Mr. RAKER. Isn't it further demonstrated on the ground—we don't have to take any theory—that many places, in particular one, for example, Lake Washington, where there was a bare, deep, unusable canyon, where to-day we find a beautiful lake and quite a little city, and we find hundreds of people building summer homes around on this public reserve, and we are getting a large amount of hydro-electric energy to supply those farmers below and those towns; whereas, if it was tied up we would get no utilization at all.

Mr. PIERCE. That is so.

Mr. RAKER. And that ought not to be done.

Mr. MATHER. May I take just a minute to clear the record on one or two matters, Mr. Chairman?

**STATEMENT OF MR. STEPHEN T. MATHER, DIRECTOR,
NATIONAL PARK SERVICE.**

Mr. MATHER. I think it would be well for the committee to know that in the present Sequoia Park, which would become part of the greater Roosevelt Park which has been referred to, there is already a water power development. The Mount Whitney Power Co., which is now a component part of the Southern California Edison Co., is actually in the Sequoia Park, in the Sequoia National Park. It is in the foothill region. It is a development which I think is a very proper one. It does not interfere with the scenic area above, but it was created under a special authorization from Congress. It enables the orange lands in the Porterville section, the Exeter section, and the Lindsay section to be properly taken care of, and in that particular case it probably was a very necessary development. I bring that up because in connection, say, with the present park it still gives Congress an opportunity if some occasion like that arises, to enable a hydroelectric development to go in, but by their own action instead of by the action of the water power commission.

While I am thoroughly in favor of the amendment that Mr. Pierce proposes, I think he is a little unduly alarmed in regard to the people of California. Of course I think what he has in mind particularly is the development of the Southern California Edison Co., who of course are providing for the people of California, rather than the question of the feelings of the people of California as a whole. Now the development of the Southern California Edison Co., does not involve in any way the area of the proposed Roosevelt Park, but that does not mean that in some future time there may not be the need of power in that particular area, but at the present time all of the development of the Southern California Edison Co.—and they have provisions for some \$200,000,000 of work to be carried on—is all outside of the area of this proposed extension. Of course, I did not come here to talk about the extension of the parks, but I thought a little statement to that effect would be advisable at this time, and also the fact that we now have in the present Sequoia Park a power company operating there.

Mr. BARKLEY. Does that power company operate through a special act of the commission or of Congress?

Mr. MATHER. Of Congress.

Mr. BARKLEY. That is exactly my viewpoint, that where hereafter an accessible situation arises, either in the creation of a park or after it is created, Congress can deal with it separately. Under the amendment which is proposed, all parks hereafter would be exempt from the jurisdiction of Congress unless Congress in the act specifically provided that it should not be; whereas if the bill is left like it is, all parks hereafter created will be under the jurisdiction of Congress, unless Congress says by affirmative act that the commission shall have power to determine the policy in that particular case.

Mr. MATHER. Mr. Merrill, by the way, just called my attention to the fact that the creation of the Mount Whitney Power Co. was not due to specific acts of Congress covering that particular company, but the act of 1901 which allowed the use of power in this particular park. But at the same time I will say that I think the law at that time, while somewhat broader in its nature, was the act which created this situation in regard to the Mount Whitney Power Co.

Mr. SMITH of Idaho. You stated, Mr. Mather, that this power plant in the Sequoia National Park did not in anyway interfere with the scenic attractions of the park or the purposes for which it was intended.

Mr. MATHER. It is located in the foothill section of the park.

Mr. SMITH of Idaho. I am curious to know why you would object, then to, the creation of a reservoir which certainly is much more attractive than a power plant within the boundaries of the Yellowstone National Park in a remote section of it.

Mr. MATHER. Of course the power plants themselves are located outside the park but the flumes and the water they obtain are in the park itself. Then, too, in this proposed Roosevelt Park country there is some storage in the high country far above the timber line. There are half a dozen storage reservoirs up on the Franklin Lakes up on Franklin Pass at an elevation of about 11,000 feet. I have been at the Sequoia reservoirs and they do not in their location detract from that scenic area, but if they were lower down in the timbered section they would make considerable difference.

STATEMENT OF MR. HENRY J. PIERCE—Resumed.

The CHAIRMAN. Are you through, Mr. Pierce?

Mr. PIERCE. Just one moment, sir. I wish to say, in conclusion, that I suggest this amendment because I am in favor of the bill. I want to see it passed, and I am sure that if its operation can be restricted to the present boundaries it will not have much, if any, opposition, and that it can be passed.

Mr. Chairman, I did wish to address myself to the other bill which you have before you, and if I may I would like to say just a few words regarding it and then file this paper with the committee.

The CHAIRMAN. Very well.

Mr. PIERCE. I am president of the Washington Irrigation & Development Co., which has made application to the Federal Power Commission for a permit to develop the water power now wasting in the Pries Rapids of the Columbia River, located in the central part of Washington, having a capacity of 400,000 primary and 300,000 secondary power, and which is, perhaps, the largest possible hydroelectric power development in the United States, aside from those contained in the St. Lawrence and Niagara Rivers.

I know that I voice the sentiment of all of the 127 applicants who have thus far applied for permits to develop the water powers of the country in earnestly favoring H. R. 15126, the bill now under consideration by your committee.

The scope of the work that the power commission is called upon to perform is very great, and the benefits which will accrue to the country through the development of its water powers will be enormous. As has been said, the applications thus far filed, will, if taken advan-

tage of, mean the development of 12,000,000 horsepower, which will cost to install over \$1,500,000,000 and would create taxable values of that amount. The labor that would be employed would require 700,000 or 800,000 men for a number of years, would save the mining of 70,000,000 tons of coal, would cheapen the cost of many of the necessities of life, and would be of direct benefit to every inhabitant of the United States.

The foreign nations—France, Italy, Switzerland, Sweden, and other countries—immediately after the close of the war turned their attention to the development of their water powers. The shortage of coal during the war had given them a tremendous object lesson as to the value of power, and the very first constructive thing they did was to begin the utilization of their wasting water powers. The foreign countries have very cheap labor, which we have not, and the development of their water powers is going to give them cheap power, and with these two elements of cost upon a very low basis they will be placed in a commanding position in bidding for the markets of the world. We do not have cheap labor here, and if we are going to compete with them in exports we must at least have cheap power for industrial use.

We have in our western country over 10,000,000 acres of land which can not be reached by gravity water and can only be reclaimed by water pumped by the electric power now wasting in our rivers and streams. It would require fully 5,000,000 horsepower to operate these pumping plants. An agricultural population of fully 500,000 could be maintained on these acres and the products would materially tend to reduce the cost of living.

The electrification of 1,000 miles of the Chicago, Milwaukee & St. Paul Railroad has shown such economies in transportation costs, and which are something over 30 per cent, that all the railroads west of the Rocky Mountains from Mexico to British Columbia now desire to electrify their lines and they can not do so until the water power is developed. One-third of the entire carrying capacity of a railroad is required to carry coal for its own consumption.

The enactment of the Federal water-power law opens up an enormous pioneer field for enterprise. Now that they are given the right to work, the right to build and expend and develop, the right to help create a great and more powerful industrial nation, those who would develop our wasting water powers will reclaim deserts and make farms, build factories and cities, open up new inland waterways, employ labor, reduce the cost of living, increase taxable values, and thus promote the welfare and prosperity of the Nation.

There exists in every portion of the United States at the present time an acute power famine. Seventy per cent of the water power resources of the United States are located west of the Rocky Mountains, while 80 per cent of the power used, whether produced from coal, oil, or water power, is east of the Mississippi River, and yet the shortage of power is relatively as great upon the Pacific coast as in the large industrial and thickly populated sections of the East and South.

The water-power law provides that licenses, under the act must pay the cost of administration of the act, so that eventually, and I should say beginning in 1922, the Federal Power Commission will, through the revenues derived from its licenses, be self-sustaining.

The law provides that they must secure the funds necessary for administration purposes from appropriations and the money derived from licenses must be covered in the Treasury, but in this indirect way the amount derived from licenses will before long amount to as much as that required through appropriations.

The commission and its executive secretary, Mr. Merrill, have done wonderfully well with the limited personnel and employees at their disposal, but they are badly handicapped at the present time by lack of funds. We, who wish to develop the water power of the country, are anxious to go to work, and we can not begin until the Federal Power Commission grants us licenses, and they can not do that until funds are placed at their disposal sufficient to make necessary investigations. The need for development of the water-power of the Nation is very great, and I trust that your Committee will act favorably and quickly upon this bill.

I thank you, Mr. Chairman, for the opportunity which has been accorded me to be heard by your committee upon this subject.

Mr. WINSLOW. Let me ask you a question. You probably represent commercial interests at this hearing?

Mr. PIERCE. I represent the Washington Irrigation & Development Co., which has made application to the Federal Power Commission for a license.

Mr. WINSLOW. Have you anything to indicate the attitude of the people at large on the Pacific coast, as distinct from those interested in commercial development?

Mr. PIERCE. You mean in what respect?

Mr. WINSLOW. In any respect.

Mr. PIERCE. I am a resident of the coast. I know how the people out there feel.

Mr. WINSLOW. I am asking for the testimony of the people there who have no particular and direct interest in the development of the water power.

Mr. PIERCE. I know that all the people of the Pacific coast want the water powers developed, because it is absolutely necessary to their comfort and well-being and the future growth of the localities in which they live.

Mr. WINSLOW. I understand that from your viewpoint, but have you any testimony or credentials which would appear to warrant you in representing the people on the Pacific coast?

Mr. PIERCE. I think that I could get a multitude of letters and telegrams which would give me authority to represent organizations, chambers of commerce, and so forth.

Mr. WINSLOW. Undoubtedly you may get them, but have you any such?

Mr. PIERCE. I have not in my pocket at this time, no, sir.

Mr. WINSLOW. Are there any such expressions that you know of?

Mr. PIERCE. How do you mean?

Mr. WINSLOW. General expressions of the people at large in respect to their interest in this proposition.

Mr. PIERCE. I am a member, for instance, of the Chamber of Commerce of the City of Seattle, and am a member of its committees and I know how they feel.

Mr. WINSLOW. I don't question your personal view, but I was wondering if you had any expressions which you could offer and

put in the record as indicating the registered opinion of any considerable number of citizens out there?

Mr. PIERCE. I will undertake to secure them, if you would like, and have them inserted in the record within two or three days. I happened to be in the East and I appeared before this committee. I think I know all the members of this committee. I have been here for the past seven years during the sessions of Congress doing what one man could to induce the passage of water power legislation so that I could develop my water power, and so that incidentally the other water powers of the country could be developed.

Mr. WINSLOW. The answer to my specific inquiry is that you haven't the goods, isn't it?

Mr. PIERCE. I don't understand you, sir.

Mr. SMITH of Idaho. Probably you might secure the cooperation of some of these experts who can manufacture sentiment on ex parte statements, if you wish to enter into the plan suggested by Mr. Winslow.

Mr. WINSLOW. I don't suggest it.

Mr. SMITH of Idaho. Perhaps these propagandists—

Mr. WINSLOW (interposing). I object to his putting words into my mouth. I said nothing of the kind. I am asking him for general expressions, not propaganda expressions.

The CHAIRMAN. Are you through, Mr. Pierce?

Mr. PIERCE. I am, sir.

Mr. RAKER. Mr. Pierce, what is your view of why there are so many applications filed all at once with the water power commission under this bill?

Mr. PIERCE. Why?

Mr. RAKER. Yes.

Mr. PIERCE. Because of the necessity for water power development.

Mr. RAKER. It must be very favorable to the water power people or they would not be so active all of a sudden. Isn't that right?

Mr. PIERCE. I think that the water power act protects every public interest.

Mr. RAKER. Now there ought to be time sufficient given or sufficient time given to this commission to work over these matters in a proper way without rushing in a new force of people to jam them through without sufficient investigation, ought there not?

Mr. PIERCE. I am informed that no permits or licenses have thus far been granted by the commission, and I am sure, Judge Raker, that Mr. Merrill, as the executive secretary of the power commission, is not going to grant any permits or licenses until those investigations have been made.

Mr. RAKER. That is true, but they have got the War Department, they have got the Department of the Interior, they have got the Department of Agriculture behind them, to select from those departments any men they want. Now what I am getting at is this—so we may be plain—there isn't any desire on the part of the water power people to get a corps of people in there, not under the civil service, just so these things can be rushed through, is there?

Mr. PIERCE. No, except that we would like to go to work with the development of these water powers. The necessity is great. The

people need the power, and we would like to see the water power commission furnished with sufficient force to do their work.

Mr. RAKER. And still with the good old staid and trusted and true officials in all of these departments, where we can get them, we ought to give them time enough to work out, to see whether or not these applications should be granted?

Mr. PIERCE. Yes, if they can obtain them, but it would seem from what the different secretaries have said that they are all pretty busy with the work of the departments and that their services can not be obtained, except to a very limited extent.

Mr. RAKER. I am not as thoroughly convinced that you can not find the people in the department yet to assist in doing this work, and I am just wondering why the power people—and I am putting this in a kindly way—are anxious themselves to force a larger corps of new officers in a new branch, to open it up so that these permits may be rushed through in a hurry.

Mr. PIERCE. If the Power Commission are not furnished with sufficient force to do their work I don't believe I will get my permit in five years to enable me to go ahead with the development of the water power I am interested in. I am anxious to get to work. I have waited for seven years while Congress has been considering water-power legislation. I don't believe that the power commission can make these investigations and do this work unless they have the necessary funds placed at their disposal.

Mr. RAKER. I am simply asking for information. Now, just one other question—and this is just for information—under this application of—what is the company?

Mr. PIERCE. The Washington Irrigation & Development Co.

Mr. RAKER. The Washington Irrigation & Development Co.—their application is for how much horsepower?

Mr. PIERCE. Well, for the development of the all possible horsepower at Priest Rapids.

Mr. RAKER. Approximately, in your estimate, what will it be?

Mr. PIERCE. 400,000 primary power, and then during the summer, during the irrigation season, 300,000 extra horsepower.

Mr. RAKER. Located where?

Mr. PIERCE. Located in the Priest Rapids of the Columbia River, in the central part of the State of Washington.

Mr. RAKER. About how far east from the city of Portland?

Mr. PIERCE. It is about 150 miles, as the crow flies, east of Portland—and is about equally distant from Seattle and Spokane.

Mr. RAKER. Now what, under your application, if it is granted, would you expect to pay—does this company contemplate having to pay the Government for this use?

Mr. PIERCE. We would have to pay our proportion of the costs of administration of the act.

Mr. RAKER. And that is all?

Mr. PIERCE. And for the use of certain Government lands which we would have to use.

The CHAIRMAN. Mr. Pierce, I suppose one reason why there has been such a flood of applications coming upon the commission is the fact that there have been no grants on navigable streams for 10 years.

Mr. PIERCE. That is so, Mr. Chairman.

The CHAIRMAN. Mr. Rogers, we will hear you.

**STATEMENT OF HON. JOHN J. ROGERS, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF MASSACHUSETTS.**

Mr. ROGERS. Mr. Chairman, I am so thoroughly in sympathy with the so-called Esch bill (H. R. 14469) that it perhaps seems captious even to suggest why I prefer the bill which I have introduced and which is numbered 14760.

My bill in its terms simply excludes from the water-power act national monuments and national parks of the United States. It seeks, in other words, to leave the situation to-day and hereafter exactly as the situation would have been if the Federal water-power act of 1920 had never included or referred to national parks and national monuments.

The Esch bill in lines 3 to 8, page 1, it seems to me, points toward something different. Whether it is intended to do anything beyond what my proposal contemplates I am not quite sure; but it provides that hereafter no permit, and so forth, within any national park or monument shall be granted or made without specific authority of Congress. I do not see wherein that adds to the legislative effect of the remainder of the bill. Clearly that authority must inhere in Congress, whether or not it is expressed in the bill as presented to the committee, but my feeling concerning the inclusion of that language is that it squints toward a policy of granting such permits or licenses in national parks. That is what I think most people who are interested in the general question are exceedingly anxious to avoid.

It is for that reason and for that reason only that I should prefer either my own bill or an amended Esch bill, so as to deal only with the straight repeal of the portion of the water-power act which relates to national parks and national monuments.

Just one word on the general question—and I do not want to go into details. There has been propoganda, no doubt, in support of this measure, but the appeals that have come to me seem to be appeals from men and women who are unselfishly anxious to protect the integrity of our national parks. People have come to me and have written to me who have never been in the national parks and never expect to be able to afford to go to the national parks and have asked that this protection be afforded for the future. I hope that the committee, Mr. Chairman, may be able to report out and to secure the passage promptly of legislation to preserve the integrity of our national parks.

STATEMENT OF MR. HENRY J. PIERCE—(Resumed).

The CHAIRMAN. There are quite a number of witnesses from out of town who desire to be heard, and if agreeable we will recess until 2 o'clock this afternoon. I hope as many members of this committee as possible will be present at that time.

Mr. PIERCE. Mr. Chairman, if there is no objection, I would like the privilege of inserting in the record, in answer to Mr. Winslow's questions, a short statement as to how I came to be here to-day, and whom I am in a way representing.

The CHAIRMAN. Very well.

Mr. BARKLEY. That does not include any resolutions or telegrams or letters in the future, does it?

Mr. PIERCE. No; it does not.

The statement submitted by Mr. Pierce is as follows:

Answering Mr. Winslow's inquiry: I have made no claim before the committee or elsewhere to speak in any representative capacity for the general public of the Pacific Coast, though I believe I know pretty well how they feel regarding the matters which have been under discussion this morning. As is well known to most of the members of this committee, I am the president of a company intending to make a large water-power development on the Columbia River. During the course of recent water-power legislation I have been in close touch with, and frequently the spokesman for, other persons and corporations similarly situated. In the present instance, being in Washington in connection with my application for a permit for the power development in which I am interested, I was requested by the officers of the Southern California Edison Company of Los Angeles, which supplies a large part of southern California with power, light, as well as water for irrigation purposes, and also by the Utah Power and Light Company and the Idaho Light and Power Company, both of which companies have their headquarters in New York City, and also by the president of the Pacific Power & Light Co. of Portland, Oreg., who is now in the East, to confer with Secretary of the Interior Payne and Director of Parks Mather, concerning a proposed amendment of H. R. 14469, restricting its scope to park boundaries as now constituted, and, if in agreement with them in regard to the amendment, to appear before this committee and suggest the amendment. This I have done.

(Whereupon, at 12.20 o'clock p. m., the committee recessed until 2 o'clock p. m. this day.)

AFTER RECESS.

The committee reconvened at 2.30 o'clock p. m., Hon. John J. Esch (chairman) presiding.

STATEMENT OF MR. J. HORACE McFARLAND, CHAIRMAN, LEGISLATIVE COMMITTEE OF THE NATIONAL PARKS COMMITTEE; PRESIDENT AMERICAN CIVIC ASSOCIATION.

Mr. McFARLAND. I am here as chairman of the legislative committee of the National Parks Association, which has an office in New York and there represents some 35 national organizations, the names of which I shall be glad to submit for the record, that have joined together in defense of the national parks. I am also president of the American Civic Association, an organization with 2,500 members, country-wide in its extent, which has had much to do with the formation of the National Park Service under which the parks are now controlled.

Mr. Chairman, I approach the matter from the standpoint of one of the two or three bills before you proposing to correct the inadvertency, let us say, under which the Federal water power act, which we all heartily favor, extended its provisions to the national parks and monuments.

It happens that our organization and members of it had close contact with Senator Jones and with Judge Payne during those days following the adjournment of Congress in the early days of June, 1920, before the signing of the Federal water power bill because we seen a very great danger to the national parks which we desired to see averted. It did not seem to us a proper thing to ask the President to veto the bill, because of the tremendous beneficences that were involved in its proper application. I wish to place that phase of the

matter clearly before the committee, and, if I may, to establish the standpoint of a common sense study of the situation.

Mr. RAKER. So we do not get too far afield, and you do not appeal to the hearts of the committee with those matters, have you ever looked upon the question to determine in your own mind the association? As a matter of fact, under the law, did the Secretary have the power before the enactment of the water power bill to authorize the construction of dams, ditches, and so forth, through the national parks?

Mr. McFARLAND. That varied in different parks. As you probably will remember, each separate park had a different enactment. It began with the Yellowstone in 1872, and the acts varied so it would be hard to say generally just what the Secretary may have found himself either permitted to do. Generally speaking, when the National Park Service was founded, it was assumed that the parks were then in some such situation as the Forest Service. In fact, as one who had to do with the writing of that act, although it was much changed afterward, I know that what we were trying to do was to establish a parallel service with the Forest Service on the one hand, and, on the other hand, to have Congress declare the purpose of the national parks, which was really a high and spiritual purpose; a purpose to constitute the need of the nation for recreation as a definite need.

Fortunately the act itself does carry the phrase originally put into it by Frederic Law Olmsted, unquestionably the ablest landscape architect in the United States, declaring the purpose of the parks. But in the present situation we see a danger to the parks. We have asked, therefore, that it be removed by putting things back as nearly as possible where they were before the Federal water power act was signed and made law.

It has been said that a very vigorous propaganda has been conducted in order to awaken the people to the situation. I think there can not be any doubt of that. The propaganda, however, has been very different from many similar efforts made in many cases. It was a wholly unselfish propaganda, without any possibility of personal gain to any of those engaged in it, to ask the people of the United States whom we were able to reach what they thought of the situation, and if they did think the national parks should be preserved free from commercialism for all the people, to say so to their delegated representatives in Congress. They seem to have so pronounced themselves rather freely all over the United States. Floods of letters have reached us in the return way, very many times with misunderstandings in them. The propaganda, as covered by the American Civic Association leadership and by the committee which I represent, included no inaccuracy in its statements—all obtained from the Federal park service.

Now, Mr. Chairman, it does not seem to me that there need be any argument about that broad question itself. You have all, without exception, shown your devotion to the parks. You are now asked to correct an error and the circumstances have been detailed to you. No fault lies with Congress in this matter. The fault is that we who are presumed to be active in the public interests did not wake up in time to urge Members of Congress to avoid this error.

Mr. RAKER. Of course, many of us are fortunate enough to get on these committees that have been very active on the parks. My associate, Mr. Taylor, and myself have been on the Public Lands Committee, and there have been more parks created since we have been on that committee than during any space of time, but the bills creating the national park service have been worked in the same way and I have been following it for the last six years. So, you see, the members of the committee are not adverse to legislation in regard to the national parks. Then, to safeguard the matter, you say it is an error to safeguard the matter. I just want to state that the committee ought to have the benefit of what they did do. We so provided in the law that if the department desired it could prohibit water power development in the parks. Is not that true?

Mr. McFARLAND. Absolutely, yes.

Mr. RAKER. Then it is a question to just simply leave it or take it from the Water Power Commission and put it into the hands of Congress?

Mr. McFARLAND. Exactly. There could not have been a better statement on the subject than that made this morning by Judge Payne.

Mr. RAKER. I know you are interested in this matter, and still I think the committee—while I am not protecting the committee—I just wish to feel that the public ought to know that this committee did not leave the national parks so that they could be devastated or so that they could be used unless the three Secretaries determined that fact, which would be the same thing as if it was left up to Congress. But we really did protect the parks in the bill.

Mr. McFARLAND. I think the intent to protect the parks was there.

Mr. RAKER. Not only the intent but they can be protected under the law.

Mr. McFARLAND. They can be protected if the situation of juxtaposition of the three Secretaries happens to be such as we now have. The incoming President can better tell you what might happen. I could not.

Mr. RAKER. What I am getting at is that the law is on the statute books now under which the parks can be absolutely protected.

Mr. McFARLAND. If you will read that, you will discover that no provision is made for hearings under this law; that these petitions are made directly to the Water Power Commission. They can grant them and the public does not get a chance to be heard.

Mr. RAKER. I intended to ask that question this morning of the two or three Secretaries. I wrote a letter to the executive secretary for more definite information. I think he will tell this committee that whenever an application is made that full opportunity will be given with hearings set and both sides will be heard. Is that right, Mr. Merrill?

Mr. MERRILL. Yes.

Mr. SINNOTT. The only thing I am getting at is that for the public I do not feel like sitting idly by and allowing myself to be put in an attitude that I have deliberately abandoned the policy we created or which was created by the committee of which we were members, and, in addition to that, when we did in that bill absolutely protect the parks. Personally, I have no objection to the method of legislation

and I think it is all right, but you will have to admit, Mr. McFarland, if you read the law, that we did protect the national parks.

Mr. MCFARLAND. I have no doubt that such is the intent, and no criticism has been made of this committee or of Congress for doing the thing you speak of. The criticism is altogether of ourselves for not having noticed the fact that the parks and monuments were included.

Mr. RAKER. When we included them that was with eyes open and then we protected them.

Mr. MCFARLAND. We are asking you to make the situation better.

Mr. RAKER. We take it from the commission and put it into Congress?

Mr. MCFARLAND. Congress created the parks. We ought, therefore, to have Congress continue to control them.

Mr. SMITH. For what reasons do you wish to have this bill passed and this provision of the water-power law amended? What is the real reason for it?

Mr. MCFARLAND. The reason is stated in the preamble of the bill.

Mr. SMITH. Is it not because you distrust the judgment of three cabinet officers? Might it have been for that reason?

Mr. MCFARLAND. Most assuredly I would not answer that in any such fashion.

Mr. SMITH. Is it not true that the reason you want this bill passed is because you are able to create by propaganda a public sentiment which would prevent the impartial consideration of any bill by Congress intended to utilize the water powers of the national parks?

Mr. MCFARLAND. If I wanted to get a twisted angle to a statement of a thing, I would ask you to frame it.

Mr. SMITH. That is a flippant way to answer. You can answer the question yes or no.

Mr. MCFARLAND. I will not answer that yes or no, because I do not want to be put in a false position.

Mr. SMITH. You remember the hearing we had before the Committee on Rules last spring on the 25th of May?

Mr. MCFARLAND. Yes, sir.

Mr. SMITH. And you made the statement that you could reach 5,000,000 people. Allow me to congratulate you on your success.

Mr. MCFARLAND. Did I make good?

Mr. SMITH. You certainly did, and probably reached more than 5,000,000 people, but it seems to me you reached them largely through ex parte statements. Except one instance I think you have acted very consistently and conservatively about your statements, but a lot of people have made misstatements and to such an extent, as I remarked this morning, that there has been a scare thrown into the members of Congress and Senators. In one of your circulars you make this statement, "The national parks are in imminent peril." That would naturally impress anyone who would see it, and they would be very much concerned about it and apprehensive that the national parks were in immediate peril. Through such advertisements as this of your association and numerous other organizations, you have been able to influence members of Congress against a proposition concerning which they know nothing, except in a general way, so

that now instead of listening to an impartial statement, simply say, "we do not want to talk about the subject and will not have anything to do with it."

The reason you and your associates are anxious to have this law amended is to be able to arouse the American people, and through them influence their Representatives in Congress to refrain from doing something which otherwise their judgment would dictate they should do, if they were not influenced adversely by extravagant and erroneous statements.

Mr. McFARLAND. You do me entirely too much credit, Mr. Smith. I have more faith in the American people and in Congress to believe that either of them can be stampeded.

Mr. SMITH. You certainly can not take that attitude after you have seen what has transpired here since last May. In your resolutions submitted to the Committee on Rules we find several whereases, one of which whereas is as follows: "Whereas Stephen T. Mather, Director of the National Park Service, has stated that raising these lakes will kill millions of feet of timber, wipe out millions of trails, and create a scene of chaos and destruction that would be an eyesore for a thousand years," etc.

That resolution was presented by you in opposition to bill 12466 which does not provide for the draining of lakes, but for the construction of reservoirs in an obscure section of the park where there are no roads or trails and scarcely any timber.

Mr. McFARLAND. I think Mr. Mather is here and he can take care of that.

Mr. SMITH. You can not get out of it that way. These resolutions are signed by you. You are the mover in the opposition in regard to the Fall River Basin and other projects in the Yellowstone Park. This statement has no reference to my bill, but to another project.

Mr. McFARLAND. Mr. Gregg, who follows me, will take care of that by direct testimony.

Mr. SMITH. If you want to repudiate your own statement, and Mr. Gregg can help you do that, let the record show.

Mr. McFARLAND. Our statements are all based on those of a man who knows the facts.

Mr. SMITH. Would you attempt to confuse the Yellowstone with the Falls River Basin?

Mr. McFARLAND. No, sir; I admit nothing and deny nothing to you. I will not answer questions framed as you frame them.

Mr. SMITH. If you are able to make a favorable impression on the committee with that kind of an answer, I shall be very much surprised.

Mr. McFARLAND. I wish to discuss the matter from the standpoint of public spirit, and I expect to do it.

Mr. SMITH. And you tried to deceive the Committee on Rules when you presented that resolution.

Mr. McFARLAND. There was no attempt to deceive, and there was no deception. May I bring my remarks to a close and say that the American Civic Association and other organizations associated together for public purposes, are purely philanthropic organizations. They ardently hope that the committee will make a favorable report on one of the several bills which would place the determination of any alterations or changes in the national parks in the hands of Congress

itself, and remove that jurisdiction from the Water Power Commission, all members of which, at the hearing this morning, desired such action.

Mr. SINNOTT. Was your organization interested when we had up the Hetch-Hetchy bill, so called?

Mr. McFARLAND. Yes.

Mr. SINNOTT. Did your organization oppose that?

Mr. McFARLAND. Yes, sir.

Mr. SINNOTT. Have you examined into the matter since?

Mr. McFARLAND. I have not been in the Hetch-Hetchy since. I was there before the legislation prevailed. Afterwards I shook hands with the city engineer of San Francisco, admitted that I was licked, and we have been good friends ever since.

Mr. SINNOTT. Do you, or does your organization, still oppose that, or have you approved it since?

Mr. McFARLAND. Having had no personal contact with it I would not be in shape to say anything because I have not heard from it. I do not know whether the result has been satisfactory or not.

Mr. SINNOTT. I just wanted to know the attitude of your organization toward that, whether you still thought it was a mistake to have granted that franchise.

Mr. McFARLAND. I cheerfully answer that: Yes, sir.

Mr. RAKER. Without even looking into it?

Mr. McFARLAND. I was there before the franchise was granted.

Mr. RAKER. You have not been there since?

Mr. McFARLAND. No, sir.

Mr. RAKER. I have been there and it has made a beauty spot where it was not before. It put money into that park where they did not have it before and where we could not get an appropriation of a cent from eastern Congressmen to help us develop parks, and it has made that more beautiful. I do not want you to hit at the Hetch-Hetchy when it is a success.

Mr. McFARLAND. You will admit I am not anxious to.

Mr. RAKER. I do not want to go too far. I will put this question and then I am through.

Mr. McFARLAND. Before you do, may I make a statement?

Mr. RAKER. Sure.

Mr. McFARLAND. In the matter of the Hetch-Hetchy you asked a question which requires a direct answer, and I answered according to my own convictions.

Mr. RAKER. Under section 4, that the commission is hereby authorized and empowered to do certain things, issue licenses, and so forth, provided that licenses shall be issued within any reservation only after a finding by the commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired and shall be subject to and contain such conditions as the secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation.

Now, you have been advised that the department has been so careful, that is, this Water Power Commission that they have not even excepted anything further. Is that right?

Mr. McFARLAND. Yes, sir; they held up all applications awaiting action of Congress, as you know.

Mr. RAKER. Did not your organization have sufficient confidence in the commission and its secretary to believe that they would under this positive declaration of the law protect the public interests?

Mr. McFARLAND. The answer to that, Judge Raker, is that I wish I could make it in words one-tenth as adequate to the subject as those you heard this morning from Judge Payne. His attitude was that the fundamental reason for constituting the parks was at stake and that ought not to be taken before any commission or secretaries. I could not hope to state it better than Judge Payne stated it or one-tenth as well as he stated it.

STATEMENT OF MR. WILLIAM C. GREGG, HACKENSACK, N. J.

Mr. GREGG. Technically I represent the National Art Club of New York City. I also represent that body of the American people who love to go to the parks in the summer time and enjoy them.

Mr. SMITH. You represent us all, then.

Mr. GREGG. All right. I take the responsibility, Mr. Chairman, to say that I represent the whole people. I have very little with which to take up your time unless Mr. Smith wants to go into thoroughly before this committee the question of the so-called Falls River Basin in the southwestern corner of the park. I was up there for three weeks and camped in there, and the conclusion of our party of six was unanimous that it was not a swamp. I took a number of photographs and have a lot of data, and I found what I consider to be a large amount of water storage available just outside of the park. I had an aneroid barometer and took notes and photographs.

Mr. SINNOTT. What time of the year were you in there?

Mr. GREGG. Just after Mr. Smith, this summer. I was in there in August and stayed there until the first few days of September.

Mr. SINNOTT. Is that the dry season in there or the wet season?

Mr. GREGG. That is the dry season in the parks. I am ready to go into it in all of its phases. I have a lot of data here if I am to make answer to Mr. Smith. Mr. Smith was in there, as he admits, for one day, or a portion of one day, and I stayed there for three weeks. We camped in several places right in the swamps. We did not know any better than to camp right in the swamp. If you would like I will show some of these photographs.

Mr. SMITH. Let me ask a question.

Mr. GREGG. Wait just a moment. Mr. Chairman, I do not know how far you want to go into this.

The CHAIRMAN. That is not a direct matter. It is another collateral matter.

Mr. GREGG. That is just the point.

The CHAIRMAN. I feel some discretion ought to be allowed Mr. Smith in cross-examination on the matter because he is the one who introduced the original bill.

Mr. GREGG. Let me make two points, then. Here is a picture of our camp where we stayed several nights in the swamp.

Mr. ELSTON. If Mr. Gregg is to confine himself to the general features of the matter, take this bill without reference to disturbing the Yellowstone, I think he had better do it now before we get into

the intricacies of the other matter. Then we can decide on the other phases of it.

Mr. GREGG. If Mr. Smith will let me finish that part before we get into this thing haphazard?

The CHAIRMAN. Very well.

Mr. GREGG. I can not add anything to the excellent presentation that Mr. McFarland has made. I have this suggestion, however, that I lived as a young man for a great many years in the West, the first half of my active life was in the West, and for the last 20 years I have been in New Jersey. As I go out and look over the western problems, as I have studied the reclamation department, and its activities, I feel that the West and East are not quite close enough together on this problem of working out irrigation and power in the West. West of the Mississippi there is two-thirds of the area of the United States and only 30 per cent of its population.

It has a great many problems and the population is necessarily in the minority. We can get together on a great many things if we can understand each other and if concessions can be made. I believe thoroughly in my investigation of all these problems that the West wants to make more money, to be more prosperous, to build themselves up. Nobody can object to that. Irrigation will do that and power will do it. We only draw the line at the boundaries of the national parks. That is a clear-cut issue which all the people of the United States can understand. The rest of the program is more complicated. I am prepared to come to Washington, and to go out West to help work out the question of how this water is to be stored outside the parks, and where appropriations may be advisable by Congress to work out the whole development of the National Parks and the territory immediately around there. Individually I see no objection to the clause that was discussed this morning. I speak of Mr. Pierce's suggestion. That brings the two sections of the country a little closer together. I do not know that I voice the sentiment of any of the other 20 odd organizations, but there is no reason why we should shy off from one another. I know the men from out West feel that they are not understood. I want to say this, however, that many loose statements are made from the western advocates of their particular interests. If you want to bear with me I could cite a number of those. I deprecate loose statements, East or West; they are not by any means confined to the East. I do not think I have anything else to add to this except the feeling that we should get together and work these things out, and that the parks should and must be maintained in their integrity.

Mr. RAKER. You are aware of this fact, that at least 10 of the last parks created have been created by the activity and constant work, battling against the East to create them, and the objections come from eastern men, eastern representatives.

Mr. GREGG. I have no sympathy, Judge, whatever, with men who sit down and take an arbitrary stand. These are great questions.

Mr. RAKER. Then we hate to be criticised when we try to preserve the parks and when we protect the parks and they come out and use them, and we find our eastern representatives battling against us to get any care and attention to these parks when they ought to help us appropriate money to put them in shape.

Mr. GREGG. I agree with you entirely and I am ready.

Mr. RAKER. Why does not your organization get behind proper, legitimate, and reasonable appropriations to put these parks in proper use?

Mr. GREGG. You give us a lead and I think we can give you quite a following.

Mr. TAYLOR. The lead is to go and get your members of Congress to help us out.

Mr. GREGG. What is the proposition?

Mr. RAKER. Get them to vote for our appropriations instead of fighting against them so we may get something for the West. We want playgrounds in the first place and we don't want you when we have made them and taken care of them and you folks use them and do not want to pay any of the cost of maintenance, to criticise us for maintaining our own property and providing for the future when we have been more active than you fellows in the East. It does not strike us as just right.

Mr. GREGG. In investigating the reclamation reports I find that 12 or 15 years ago, 1902, I believe, the proceeds of the sale of public lands were turned into the United States Treasury to be expended in reclamation propositions for the West. That took out of the United States Treasury something over \$100,000,000 of money that belonged to the people of the United States. No interest has been paid on any of it and no interest is expected and I have never heard of people in the East or any part of the United States object to it. That was a big proposition.

Mr. RAKER. It has been a battle royal for 10 years to my personal knowledge, to hold the reclamation projects on. They are always criticising us in regard to irrigation and we are paying every dollar back but what we want is to develop the country and pay back every dollar of it.

Mr. GREGG. But the paying back is not always done without objection. There have been two cases of litigation where the westerners have refused to pay back, although they have got large benefits.

Mr. RAKER. Those are men that came out from the East.

Mr. GREGG. That is the Yuma and the Boise project.

Mr. WINSLOW. Are those appropriations made from money that comes into the Treasury as taxes?

Mr. GREGG. It is the money paid into the United States Treasury from the sale of public lands.

Mr. WINSLOW. The original appropriations necessary to start the projects.

Mr. GREGG. You mean irrigation projects?

Mr. WINSLOW. No; the parks.

Mr. GREGG. For the parks, naturally, it comes out of the United States Treasury along with other appropriations. The Yellowstone Park has \$140,000 to \$150,000 annually.

Mr. WINSLOW. The tax money of the people is what is voted to purchase these parks.

Mr. GREGG. Not that I know of. I am not dwelling on that line. I have studied the reclamation department of the Government.

Mr. WINSLOW. Originally?

Mr. SMITH. They were public lands.

Mr. WINSLOW. Does it not come out of the Treasury of the United States?

Mr. SMITH. They belong to all the people.

Mr. WINSLOW. That is what I want light on. The people of the East are the people that pay the taxes and people east of the Mississippi pay two-thirds of the taxes of the country. Don't you think it has come to a point for the people of the East to think these things over?

Mr. RAKER. They get our money. We do not object to it. This is our land; it belongs to the States and to the country, and it is taking our taxes, too.

Mr. WINSLOW. The eastern people are not getting along on this proposition when they pay the bill. It all comes from the tax money, whatever it is they do to raise it.

Mr. GREGG. I was just making the point to the California Congressman that we have made some concessions. I never heard of active criticism which turned on the point of the proceeds of public land sales going into the Treasury for the benefit exclusively of Reclamation Service, although the work of the Reclamation Service is entirely in Western States.

Mr. RAKER. We only got that six years ago by simply scaring up every man we could from the South and West.

Mr. GREGG. 1902.

Mr. RAKER. Six years ago when we amended it. We have had a struggle every time.

Mr. GREGG. I want to say this about the parks. Yellowstone Park is one of the reasons why we are so apprehensive. One invasion begets another. Mr. Smith was successful in getting his bill through the Senate or a bill similar to his, and right now there is before Congress a bill to turn over the Yellowstone Lake with its area of 136 square miles to the control of the State of Montana. The bill says so.

The CHAIRMAN. Whose bill is that?

Mr. GREGG. Senator Walsh's bill. They raise the dam 6 feet. You understand what that does. That affects the water for the entire area of the lake which is 136 square miles. To do that the State of Montana assumes control of it and it raises and lowers the gates as they think best. They regulate the rise and fall on the shores, and as to their employees, I do not believe that the United States Government can hold jurisdiction over them. So you see we inject an entirely different proposition, perhaps, because Mr. Smith was so successful in getting his bill through the Senate.

Recently I have read in a magazine published in Salt Lake City an article in which a man advocates the immediate use of the Shoshone and Lewis Lakes as a reservoir, in which he admits that it will flood a great number of thousands of acres of land in the Yellowstone Park and that it will flood the public roads for at least three miles, but other arrangements can be made, etc.

Now, I was in the Yellowstone Park and vicinity seven weeks in 1920 and seven weeks the year before with a pack horse train, going around in unusual places as well as usual places and I have personally seen and know of about 10 large reservoir sites right in there and if the people can get one, why not two, and why not three, and so on. It only takes three or four to absolutely destroy the park. I think anybody will admit that.

In the Lamar valley, where the buffalo herd is kept confined to the valley, there is a wonderful storage possibility. Mr. Smith, I

suppose you were over there to see that. It has a wonderful storage which would make your mouth water to see. The canyon's walls are close together, and you can put in a dam of 150 to 200 feet by which you can back water up 4 or 5 miles on comparatively level ground. There is another one, in the Pelican Creek Valley, and there are several others.

Speaking about the geysers located in this wonderland, we do not know just how they operate. Mr. Haynes, photographer at the park, made an artificial geyser by experimentation by putting in pipes and having a certain height and column of water by which he made a reproduction of a geyser.

Mr. SINNOTT. Is that the one we had in the Interior Department?

Mr. GREGG. Yes, sir. He found that by varying the height or size of the column or the outlet and inlet it stopped flowing. Now, the geysers are surely dependent upon the nice balances of water pressures and openings, etc., and when you store water in there you do not know what you are doing. We think we are all right, like a boy who cuts into his drum one-eighth or one-tenth of an inch, but we do not realize our loss until after the damage is done, when it is too late and we can not restore it.

Mr. SINNOTT. You are opposed to establishing any precedent of encroachment in the national parks?

Mr. GREGG. Yes.

Mr. SINNOTT. Once a park always a park?

Mr. GREGG. And for that reason I think the creation of a park should be very carefully studied from the standpoint of the interests of the whole United States, and no territory should be lightly put into the parks.

Mr. ELSTON. You do not mean, Mr. Gregg, that the condition of this country might not reach such a state 100 or 200 years hence when a modified use might not be made of particular places in the park that would not destroy the scenic value or modify it to a little extent, so that relative use could be made of the water where it might be done safely?

Mr. GREGG. Most certainly I agree with you.

Mr. ELSTON. Don't you think that something of that kind might occur in the future?

Mr. GREGG. Certainly.

Mr. ELSTON. You must realize that in the big parks, and I am a great park enthusiast myself, I feel that sometime a juncture such as this might happen. The parks themselves are making this modified use right now. In the Yosemite they are scarring the cliffs by roads, scarring the cliffs even by pipe lines, putting in power plants of their own all through, and I know right now of one where one of the high chiefs, a late president of one of our associations, is proposing to put an elevator up there on the cliffs of Glacier Point. In theory, at least, it mars the thought of solidity in that great cliff, to that extent invading your ideas. That is proposed by one of the high chiefs of your group.

Mr. GREGG. That is for service to the tourists.

Mr. ELSTON. For service, but at the same time he recognizes even the right of invasion of a utility into the parks for the benefit of those who go into the parks, which practically modifies to some degree the extreme that some of the park men are urging. I want to agree with

you, and I am classified as a person who is highly in favor of the parks, but I might save that one clause for possible emergency uses in the way distant future.

Mr. GREGG. Mr. Chairman, I want to speak broadly on this subject and not try to haggle over small details. This is a big question. It is a question that Congress in its wisdom can handle and should handle when such an emergency comes up.

I think I have covered that point. If Mr. Smith wants to bring out some facts, I will be glad to proceed.

Mr. SMITH. It is very evident that the reason Mr. Gregg and Mr. McFarland and his associates are anxious to have this bill passed and the Federal water-power law amended is because of the fact that they do not want to rely upon the judgment of the members of the water-power commission and the expert advice which will be furnished to it regarding any of these projects. It is much easier to influence Congress adversely on legislation that might be proposed. I do not think that any one will deny that that is the real reason for the introduction of this bill and its advocacy here before the committee.

Now a dispute has arisen as to the character of the lands in the southwestern corner of the Yellowstone Park wherein it was proposed to construct a reservoir to store 200,000 acre feet of water to afford supplemental water supply to 200,000 acres of land, a good portion of which is now under cultivation. Because of the shortage of water many of the farmers frequently lose a portion of their crops and some of them all of their crops. My information with reference to the character of that land was based upon the official maps of the Government such as we have here of Yellowstone Park, compiled by the United States Geological Survey, and it is supposed to be authentic. It was based upon the report of Mr. Henry Gannett, of the Geological Survey, who in 1878 went into this particular section of the country and made a report from which I wish to quote a sentence:

Falls River Basin into which this stream debouches abruptly, the plateau ending suddenly in a line of cliffs facing to the westward is a large valley, part of which is open, while a part is covered with a dense growth of large coniferae and the ground is cumbered with fallen timber to such an extent that added to the swampy, springy nature of the soil, the basin is well-nigh impassable.

I also formed my conclusion in the matter by advice from the Director of the Reclamation Service, who in a letter addressed to me on the 18th of last March confirmed the statement of Mr. Gannett, and also the official map and also based on his own observations because he went in there as the representative of the Interior Department to survey the possible sites for reservoirs in which water could be stored. I am rather surprised that we have here before us a gentleman who wishes to repudiate all of these official statements and asks this committee to agree with him that this particular section of the park is not as represented by the official reports, as I have said many times before to the representatives of these organizations and others interested in the national parks, that I would not advocate the construction of any project in any national park which would in any way destroy any of the scenic attractions of the park. I want to make it clear that I do not wish to encourage the construction of any project which would detract from the beauties of the park, but this reservoir site is located in the extreme southwestern corner of

the park, very remote from roads or trails, and I contend, and the official reports bear me out in my statement, that that section of the park has no scenic attractions.

There is another feature which it seems to me we should take into consideration, and that is that the property losses in eastern Idaho among those farmers, where they put in their seed and cultivated their crops up until the late summer days of July and August, are entitled to some consideration, and that we should not disregard their rights in the matter. They are out there on the desert attempting to build homes and develop the agricultural resources of the country and should be encouraged in their efforts. It is very evident that at the suggestion of these organizations Senators and Representatives in Congress have been deluged with telegrams and resolutions based upon the erroneous statements made by such gentlemen as Mr. Gregg, and I might name others.

Mr. GREGG. You think that is quite fair to say that my statements are erroneous?

Mr. SMITH. I do. I do not mean willfully erroneous.

Mr. GREGG. We are discussing this on a broad basis.

Mr. SMITH. I do not mean that you willfully misrepresent the facts.

Mr. GREGG. That I was mistaken in what I saw?

Mr. SMITH. I have here an article appearing in the Saturday Evening Post of November 20, 1920, written by William C. Gregg. At the time I read that I did not recall that I had ever heard of the gentleman, but upon reflection I remembered that he was before the Committee on Rules when the Fall River Basin matter was under consideration last May. He has published here [holding up paper] some wonderfully attractive photographs of some very beautiful waterfalls, and no doubt intended to leave the impression upon the readers that if this reservoir was constructed these beautiful waterfalls would be destroyed.

Mr. GREGG. But the statement is not made that they would be destroyed.

Mr. SMITH. No. You are shrewd enough not to make that statement, but you make the inference there by using a deceptive caption, and the photographs show that is the intent.

Mr. GREGG. Go ahead.

Mr. SMITH. Here are some similar photographs which appeared in the illustrated section of the metropolitan papers of the country.

Mr. GREGG. That is not signed by me and I have not had anything to do with the caption.

Mr. SMITH. They are your photographs.

Mr. GREGG. I admit the photographs.

Mr. SMITH. I have another print here by T. Gilbert Pearson, president of the National Association of Audubon Societies of New York. At the top of this circular is a photograph of Colonnade Falls, Yellowstone Park, with the following caption:

National parks to be destroyed unless quick action is taken—Colonnade Falls, Belcher River, Yellowstone Park—One of the 40 or more waterfalls, cascades, and hot springs, beautifying the territory, designed to be used by an unsightly reservoir for commercial purposes.

According to the United States Geological map Colonnade Falls is 500 feet higher in altitude than the Falls River Basin.

Mr. GREGG. That is your only basis for making that statement?

Mr. SMITH. What better basis than that can be had than the official map?

Mr. GREGG. When we point out errors on the map it ought to be a basis.

Mr. SMITH. That is what they are claiming, Mr. Chairman; what assumption to claim that the official records are not correct.

Mr. GREGG. I am not assuming; these are facts.

Mr. SMITH. Colonnade Basin is at least 5 miles up the river from Falls River Basin, according to the official maps, and it is 500 feet higher in altitude.

There are no waterfalls that could possibly be destroyed by the construction of that reservoir, and no hot springs, nor cascades. In this circular prepared by Mr. Pearson he is also appealing to people to whom he sends it, asking them to contribute money to a fund, the minimum of which must be \$5,000 in order that he may print more of these false statements and circulate them throughout the country, and send them to Members of Congress and Senators. I am told that the present Secretary of the Interior, Mr. Payne, at two or three social functions in Washington in discussing this proposition based his assertion that the waterfalls would be destroyed on the erroneous information which has been furnished to him by such circulars and literature.

The point I make is this, that it is absolutely impossible for the Congress of the United States to consider a matter of this kind impartially and unprejudiced when the people who are interested in the policy that nothing at all shall be touched in the national parks are able to get these false and erroneous statements before the Congress. If this bill is passed it simply means this, that instead of having three Cabinet officers appointed by the President of the United States as part of his official family, determining whether or not the construction of a water-power plant or a reservoir within the boundaries of a national park, we are going to fall back on to Congress to determine the matter; when because of these false representations which are being made in the public press, it is impossible to induce Congress to even consider the proposition. I understand that there was an understanding entered into with Secretary Payne that when the water bill was signed the pending bill to amend the law would be introduced, otherwise I would certainly oppose it. Under the circumstances I feel that as our chairman and Senator Jones and other Senators have given their promise I should not do so.

The CHAIRMAN. The matter was never referred to me and I never made any promise.

Mr. SMITH. It seems to me that the Congress, instead of having these matters imposed upon the Representatives, and it is largely a technical matter, should insist that the three Cabinet officers composing the Water Power Commission should carry out the provisions of the law. If we permit all of this misrepresentation to poison the minds of the Members, we never will have any legislation that will afford relief to the farmers such as I represent in eastern Idaho. I think it will be very disastrous to the agricultural interests of the country, and to the people living in villages and towns who may be benefited by water power development in national parks, if we have to depend on Congress, when we would be confronted with this kind of propaganda, which is nation-wide, and which makes it impossible

to secure the consideration of a bill for the utilization of water in national parks. That is the reason they favor the enactment of this legislation. Prejudice, not reason, should be the deciding factor.

Mr. GREGG. I do not know that there is any question asked.

Mr. SMITH. I simply want to make this statement. I think it is assumptious for a private citizen to come into the committee and insist on our repudiating the official records compiled by the officers of the Government, who are unprejudiced and supposed to do their duty, and accept his opinion instead as to the character of the country involved.

Mr. GREGG. The last general proposition, I understand, is that you are blaming us for wanting to trust Congress with handling the national parks and that you are afraid to have Congress handle it and prefer to have the commissioners handle it, although the commission itself, in the interest of the parks, does not wish to handle it.

Mr. SMITH. It is a matter that Congress can not take time to consider in its details. They do not have the opportunity to see these parks, especially the remote sections, but these three Cabinet officers, sworn officers of the Government, who are unprejudiced, will take action upon information furnished by private citizens and the Government surveyors, and decide whether or not the utilization of water in the parks will be to the best interests of the people of the country.

The parks are the playgrounds of the United States, but there were only about 80,000 people who went into the Yellowstone National Park this year and the people whom I represent in eastern Idaho who would be benefited by this aggregate nearly 30,000, and if they could get this water to irrigate their lands and build up the country there would be several times that number. I saw in the paper recently that a woman's club over in Far Rockaway, N. Y., passed resolutions condemning the Falls River Basin project and at the same time raised \$1,000 to send to the suffering Armenian children in Europe. If we were permitted to utilize this water to carry it to the farmers in eastern Idaho we would have a great deal less suffering among the children of parents out there whose crops have dried up because they can not use the water to mature them.

Mr. GREGG. Are they suffering?

Mr. SMITH. Absolutely suffering. I can show you photographs of the homes of people on these lands in which you would not even put a garage, patiently waiting in the hopes that they may get the water to put on their lands.

Mr. GREGG. I have a little evidence that I hope I will be permitted to give in on that.

The CHAIRMAN. Very well.

Mr. GREGG. To answer the question of the Congressman from Idaho, first, there is the data we have before the Public Lands Committee, where he made this statement which is in the record:

There is absolutely nothing in the way of unusual scenery or other interesting features in this part of the park—

The southwest corner—

but the entire area—

Mark the words, because it is important to get those words—

but the entire area contains only the ordinary western mountain landscape scenery, such as may be seen along the lines of travel for many miles by any tourist approaching the park from any direction.

I hope I have made that clear. That was the testimony of Congressman Smith before the Public Lands Committee or in the report he wrote. You wrote that?

Mr. SMITH. That only had reference to the basin, not to those waterfalls and cascades.

Mr. GREGG. You used the expression. I have read the emphasis there. The entire area, is what you said. Had you been in that district when you wrote or spoke those words?

Mr. SMITH. No; I said that is based on information and official reports furnished to me. But I have been in there since.

Mr. GREGG. I protest, Mr. Chairman, that was a very strong statement to make when he had no information of his own. It seems to me to be his own information.

Mr. SMITH. I had it from the officers of the Government.

Mr. GREGG. It looks like your own testimony. I was astonished to have you admit to me afterwards that you had not been in there before this summer and admit then that you were only in there part of one day.

Mr. SMITH. I was in there one day and had opportunity to drive over the basin for four hours.

Mr. GREGG. You had a team of horses?

Mr. SMITH. Yes, sir.

Mr. GREGG. If you can get over there with a team of horses in four hours, you must have had solid ground under you.

Mr. SMITH. This basin only covers 8,000 acres.

Mr. GREGG. That is quite a lot of territory.

Mr. SMITH. You can get around 8,000 acres in less than 4 hours.

Mr. GREGG. Mr. Chairman, what we have found in that 8,000-acre basin was, roughly speaking, about 4,000 acres of meadowland and 4,000 acres of timber. The meadows are separated and bordered by timber; one meadow contained 1,000 to 1,200 acres. All meadows are hay meadows. I used to be in the timber and saw-mill business in northern Minnesota. I have cruised a great deal of timberland. I have bought and paid for it on the basis of stumpage standing and you will permit me to say that I made an estimate very roughly of over 40,000,000 feet of standing timber on this 4,000 acres. It is not large timber; it is young, thrifty growing pine timber.

Mr. SMITH. What could you do with that timber? It is all small. It is not over a foot in diameter.

Mr. GREGG. I am giving you my observation against the statements that have been made that there is no timber in there.

Mr. SINNOTT. What kind of pine is it?

Mr. GREGG. Lodgepole pine. I have got some statistics on that, but I will not take up your time. Now, about those people who are suffering up there. We found outside storage, and it is my judgment, and I had an aneroid barometer and took the levels, that there is a great deal of storage outside that would equal the inside storage that they are after. I have the photographs, and if the committee wants to investigate that, I have a lot of information.

The statement that I want to follow up is the suffering of these people in Idaho. Mr. Chairman, I hold in my hands a magazine called the New West, published in Salt Lake City. This is the December, 1920, issue. They had a man up on the Snake River writing up this country. There are a number of irrigation articles

in here which appeal for an increase of irrigation, the building of dams, etc., and along here are a number of sidelights that show that it is a thrifty, prosperous community. I was down there also, and these statements agree with my own judgment. Near Ashton, which is 25 miles from the park, dry farming is used, where they can not irrigate. One of the erroneous statements here made was that there were 200,000 acres that can be added. That is an inference.

Mr. SMITH. No; a supplemental supply of 200,000.

Mr. GREGG. The 200,000 acres there can not all be irrigated, because it is rolling ground. You must conduct your water on a level that is physically and financially possible. All land lying above that level is dry farming, or nothing. Is not that so? There is no way to get the water up unless you pump it up, and as that is rolling ground they can not or will not pump until the products of these farms will justify it, or some aqueduct construction by which they can get the water to the top of the higher points of the farms.

Here is a report of J. E. Bates, instructor in vocational agriculture at Ashton, which is in Fremont County. He spoke about some of the high-school boys, and said:

During the last year these Smith-Hughes boys have produced 42 bushels per acre dry land oats—

This is this year, 1920, that they produced 42 bushels per acre dry land oats.

and 65 bushels per acre of oats on irrigated land; dry land Marquis wheat, that made 24 bushels per acre; potatoes making from 225 to 400 bushels per acre.

Mr. SMITH. That is in a different section of the country.

Mr. GREGG. This is in your county, Fremont County, where your farmers are located?

Mr. SMITH. The counties up there are about the size of the State of Connecticut.

Mr. GREGG. Here is a report from Drummond, Idaho. This man has been sent up there to write this up for this paper. Drummond is 9 miles from Ashton; that whole area is in your "suffering" district. It is all in Idaho and it is all in the Snake River drainage territory. What this man says of Drummond, Idaho, 9 miles from Ashton, is pretty close to the argument. He says:

Dry farm wheat is a feature of the countryside, and many farmers have raised from 30 to 60 bushels per acre in prosperous years, with only one failure in 20 years.

Mr. SMITH. It shows your ignorance of dry farming in that country. Dry farming is successful up in the hills and not down in the valley where it is proposed to put this water.

Mr. GREGG. I am just calling attention to these reports which are not written for any other purpose, as far as I understand it, than to tell the truth about those districts. It was not expected to be brought into this hearing at all. The West has complained that we do not understand the West, that the West itself understands its own problems, and I think there is a great deal of force in that. For that reason I should be more inclined to take the testimony of the West as to some of these things and I protest that many of the statements that the Congressman has made or inferred are not borne out by the facts. Take those meadows in the Falls River Basin, I can show you

the grass. If you saw that picture of our camp on that slough swamp where I was, expecting to find nothing but cat-tails and such things, the picture is evidence of just what is on those 8,000 acres.

MR. SINNOTT. Will this area of 8,000 acres be flooded by the reservoirs?

MR. GREGG. It is intended to be.

MR. SINNOTT. How deep will it be flooded?

MR. GREGG. A 50-foot dam is to be put in, as I understand it.

MR. SINNOTT. Would any of these falls that you have referred to be in this area of 8,000 acres?

MR. GREGG. Only one.

MR. SINNOTT. How does the flooding of this area affect the falls? Does that drown them out in any way?

MR. GREGG. The Great Belcher River Valley is a wide, splendid valley and on the north and west is the Madison Plateau, which rises 1,000 or 1,500 feet above that Belcher River bottom, while on the other side is the Pitchstone Plateau lying on the east. In between is the Belcher River canyon. Over the face of these plateaus and in the Belcher River canyon are a number of falls and cascades. One, "Colonnade Falls," is right down near the mouth, as I remember it; we camped two nights at the mouth of the canyon right in the swamp, if you please. It was good dry grass ground. We went from there up to Colonnade Falls one day and my remembrance is there was a rise of not over 30 to 50 feet. I can not say positively, but there was no appreciable rise to us as we rode through there on horseback.

MR. SINNOTT. My question is whether the reservoirs would drown out or flood out any of those falls?

MR. GREGG. The height of the dam would determine, in my judgment, as to whether the water would go to the foot of the Colonnade Falls or whether it would fall short a few hundred feet or half a mile.

MR. SINNOTT. Then you do not know whether any of these falls would be wiped out?

MR. GREGG. No, I did not say that they would be destroyed, but the whole scenic area would be destroyed because you would cut off these various falls from access.

MR. SINNOTT. How many of these falls are there?

MR. GREGG. From these plateaus falls a number of streams, quite beautiful falls and cascades.

MR. SINNOTT. About how many of them are there?

MR. GREGG. In that immediate circle?

MR. SINNOTT. Yes.

MR. GREGG. Including two in the canyon there are five capital pieces of scenery. I say capital. They are worth a whole lot to any community that has them. As I have said, if they were in the State of Illinois or Indiana they would be advertised.

MR. SINNOTT. They would not be affected by the water and would not be drowned out?

MR. GREGG. I do not say so and have not claimed so and it is not so. But the access to them from the ordinary approach through this valley would be destroyed. There is one more point. This valley is the finest valley of the Yellowstone National Park. It was not known before particularly.

MR. SMITH. You do not claim to have discovered this valley?

Mr. GREGG. No, sir; I did not say so.

Mr. SMITH. You said it was not known before.

Mr. GREGG. You were in there this summer before I was. But the question is as to the swampy character of these bottoms. You can not get away from that grass. That grass has been there a long time and is what we call "red top" and there are broad stretches of it. I will admit that meadows in the spring are sometimes soft. You can go out in any of our States and the farmers will tell you in the springtime not to go on the meadows because you will mire down. But during the summer season, July and August, and the first half of September, I firmly believe that those bottoms are quite perfect for campers or tourists' purposes.

Mr. TAYLOR. As I recall it, there was the same talk before the Public Lands Committee and the Rules Committee about the possibility of cutting out a portion of this park for this purpose. Are your associations just as much opposed to it as you would be to having Mr. Smith's bill passed infringing upon the park as it is?

Mr. GREGG. Yes; for various reasons. First, because we have got outside storage. That would dispose of the whole question.

Mr. TAYLOR. You do not think this land could be taken out of the park without serious injury to the park?

Mr. GREGG. Take the most beautiful valley in the park and the most attractive because it is surrounded by canyons and streams and falls and patches of timber, making an ideal camping place.

Mr. TAYLOR. There are thousands of places like that.

Mr. SMITH. Ten thousand.

Mr. TAYLOR. Throughout the west that could be put into a park just as nice as that.

Mr. GREGG. Next to the reservoir site on the east are also several falls and cascades. If you put in a dam and flood the whole bottom, you back up the water to most of these features, cutting them off from access. It seems to me it would spoil the use of that part of the park. There would be only one access—from the rear.

The CHAIRMAN. I think we have devoted enough time to this feature of it. There are so many witnesses here from out of town. There will be no other chance for a hearing as the Interstate Committee will meet to-morrow.

Mr. GREGG. I want to say that we found that one of the streams, was entirely wrong on the topographied map and it does not show the Bechler River where it is supposed to join it.

The CHAIRMAN. I think this map on the Government publication is not absolutely correct because it was surveyed in 1883 or 1885 and there is a marginal reference of a partial revision in 1910 by A. T. Davis. It is possible that might be of such size as that there would be topographical errors in it.

Mr. GREGG. We found it so.

The CHAIRMAN. There is no doubt about that.

Mr. SMITH. You spoke about this beautiful valley as very attractive and a place in which to camp. Do you think the tourist would leave the shaded portions of the park and come down into this mosquito infested section which up to the 1st of July or August is a swamp? Did the mosquitoes bother you any on the 9th of August?

Mr. GREGG. The mosquitoes are bad in the park at times everywhere.

Mr. SMITH. They were not bad in the park proper on the 9th of August because we went into the park and after we left the Falls River Basin, found no mosquitoes; but in the Falls River Basin on the 7th of August the mosquitoes bit me so badly that the lumps on my neck as a result did not disappear for several weeks after the trip.

Mr. GREGG. I am sorry.

Mr. SMITH. The same was true of the other men. I suppose you think that it is a delightful place in which to camp?

Mr. ELSTON. Do you know whether the plans for the benefit of the park include this rather remote section which you say is scenic and is one of the major attractions which would be taken in in viewing the park or is it an isolated place which will never be in current travel?

Mr. CREGG. There are one-way rules on the roads of the park because of travel congestion. They have not anywhere near adequate roads enough and they have not enough camp places. This is only 20 miles—right into the heart of it—only 20 miles from the Old Faithful Ceyser.

Mr. SMITH. Would you and your associates be interested in a proposition for these farmers who are anxious to get this water to build this dam wide enough, covering a distance of 2 miles, so that you could connect up with a road system leading up to the Old Faithful Ceyser?

Mr. CREGG. Outside of the park?

Mr. SMITH. No.

Mr. CREGG. We would be interested in anything outside of the park.

Mr. SMITH. To build a dam wide enough, like Lake Roosevelt Dam, and make it part of a national road system to get into the Yellowstone National Park?

Mr. CREGG. I think I have made myself clear when I say we stand for no invasion of the parks. I do not speak for the policy outside of the parks.

Mr. SINNOTT. Did you say the place where you camped was within 20 miles of Old Faithful?

Mr. CREGG. Yes, sir.

Mr. SINNOTT. Is that the Falls River Basin?

Mr. CREGG. It should be called the Bechler River Basin. The Falls River is really entirely out of it.

Mr. SINNOTT. The pictures show where you camped.

Mr. CREGG. Yes, within 20 miles of Old Faithful. Roughly speaking, that is the distance of it; yes.

STATEMENT OF MR. CHARLES W. KELLOGG, BOSTON, MASS.

The CHAIRMAN. Mr. Kellogg, will you please state your full name, whom you represent, and your occupation?

Mr. KELLOGG. I represent Stone & Webster (Inc.), of Boston, Mass. I am here, Mr. Chairman and gentlemen of the committee, only on bill 15126, on the question of additional personnel for the Water Power Commission. The matter came to our attention in connection with a small project on the Hudson River at Troy, N. Y., for which

we are asking a permit from the Water Power Commission, and in response to which application we learned it was likely there would be a considerable delay in the issuance of a permit, and subsequently a license, on account of the difficulty of getting the right men to pass on so many applications as were pending before the commission at the present time. It was for that reason I thought it wise to come down here and present our views to your committee on the subject. Like the preceding witness, there is very little that I can add so far as information goes to what the three secretaries said this morning, but I thought, perhaps, I could add just a word from the point of view of a member of an engineering and constructing organization.

Our organization has been constructing water powers for something over 20 years in various parts of the country. We have constructed something over half a million horsepower in various parts of the United States. I know our feeling would be, if we had charge of of any such proposition as the Water Power Commission has, with 12,000,000 horsepower applied for in the first few months of the commission's operation, that a very large and competent force would be necessary to handle that work expeditiously; a work so large that it would be probably almost impossible to secure sufficient men in numbers and in technical knowledge from the other departments. We therefore think that such a measure as is proposed in this bill in order to obtain the necessary force is a proper one.

There is only one other point I think it proper to make in that connection, raised by the chairman this morning, and that is the question of haste, or, rather, of rushing these applications through as speedily as possible. I am sure that so far as I am concerned, or anyone else interested in water-power development, there is no desire to have such haste on the part of the Government that the work might be done carelessly or that the public interest might not be wholly conserved. I think you gentlemen all realize, and everyone in the country perhaps also realizes—at least everyone who has thought about water-power development—what it means to the country to have our latent water power developed with such expedition as a thoroughly competent and adequate force may bring about. And I think, considering the enormous amount of detail involved and the importance of the projects in conserving fuel, it is real economy in the end to expedite matters and begin getting results.

In other words, if an appropriation at this time could cut down to one or one and a half years the work that otherwise might require five years, the increase in conservation of coal which would result from that more rapid development of water power would be very considerable. Of course, it is a purely business proposition. My only purpose in appearing here to-day is to say that it seems to us as a purely practical matter that this commission ought to have an appropriation for quite a considerable staff of its own, to be furnished in the immediate future, to handle this important branch of the public business. That is all.

Mr. RAKER. You are familiar, of course, with this water-power bill?

Mr. KELLOGG. I have read it several times.

Mr. RAKER. You are familiar with this provision that practically all the men shall be furnished by three of the present Government departments, War, Interior, and Agriculture, and that the work shall

be performed by their engineering, technical, clerical, and other personnel, except as may be otherwise provided by law?

Mr. KELLOGG. Yes.

Mr. RAKER. There are three full departments turned over to the use of the commission. There is no limit as to how they may draw on these several departments?

Mr. KELLOGG. Without knowing anything about the business of those departments, which I do not pretend to know, might it not be a fact that those departments are engaged in various branches of Government activities requiring the services of the men they now have?

Mr. RAKER. Very true; but all three of these departments have engineers, technical experts, and other personnel who have been engaged in water power work; the Agriculture Department, the Department of the Interior, and the War Department. They have been investigating and handling this subject. What I can not understand is, why you, representing Stone & Webster, are urging a new organization, instead of taking men from the departments you now have.

Mr. KELLOGG. Do not misunderstand me—

Mr. RAKER (interposing). I do not get your viewpoint at all.

Mr. KELLOGG. I want to try to make that clear.

Mr. RAKER. I wish you would.

Mr. KELLOGG. So far as Stone & Webster are concerned, I started out by explaining that the only water power we are interested in in connection with this bill at the present time is a very small one for one of our clients. It is not a matter of great importance to us just when that application is granted. But as I recall Secretary Baker's statement this morning to your committee, it was that the volume of applications which have come in already to the Water Power Commission represent about 12,000,000 horsepower, or about six times the volume that had come in to all of the three department involved in their entire history. As I understand the situation it is brand new and a very large development of activities of the Federal Government—

Mr. RAKER (interposing). Well, but I do not understand—

Mr. KELLOGG (continuing). Just to continue the thought, if you please: I should imagine that unless the existing departments are very much overmanned and very inefficiently managed—and I think it improper to assume that they are overmanned—it would be impossible for them to spare a sufficiently large number of men from their present organizations to handle this work. And I understand that Secretary Baker so stated to your committee this morning.

Mr. RAKER. The Department of Agriculture has been doing that work for the last 16 years.

Mr. KELLOGG. Not, however, on any such scope, have they?

Mr. RAKER. To a general extent.

Mr. KELLOGG. It is a matter of the scope of the work now that we ought to consider.

Mr. RAKER. When have power plants scattered all over the country that they have handled, developments that they have investigated, and from my viewpoint the Department of the Interior, and the Department of Agriculture, and the Department of War have been handling the matter. What have become of those people that they have

been using in this work? And if there is such an urgent demand why hasn't this commission taken those men out of those departments and then put the matter up to the Committee on Appropriations to supply the men that might be needed in addition? And why have not those three departments put up to the Committee on Appropriations the matter of supplying men in place of those that have been drawn from their departments?

Mr. KELLOGG. As to that particular question, of course, I can not answer. I am simply thinking of the general condition which now presents itself to the Water Power Commission and trying to make clear how large a proposition it is.

Mr. RAKER. That is true. But you have come before the committee asking an amendment of the law to make an entirely new organization; to take from the bill provisions which the committee, after long and mature consideration, put in in the hope of getting results in an economical way and utilize the ability and experience we had in these branches of the public service. Now, after all the consideration this committee has given the matter and the effort it has made, all of a sudden there seems to be a change of sentiment to put aside all those men of experience and to get a new organization, and just for what purpose I can not understand.

Mr. WINSLOW. Will you pardon an interruption for a moment, Judge Raker?

Mr. RAKER. I will.

Mr. WINSLOW. Mr. Kellogg, I would like to ask on that point is it your purpose to call the attention of the committee to the fact that if we are to have any such organization as the one proposed it is your advice and suggestion that we look at the necessities of the situation, look the situation squarely in the face, and make an adequate appropriation for them to do the work?

Mr. KELLOGG. That is exactly my idea.

Mr. WINSLOW. And I think that is perfectly clear. Judge Raker, I think the witness is giving the benefit of his judgment in an attempt to warn us of conditions.

Mr. RAKER. I know, but I want to call the committee's attention and the gentleman's attention to the fact that we have already done all that, and have been doing that for 15 years or longer. I saw enormous electric plants this summer, and saw one opened up by the Forestry Service of the Department of Agriculture.

Mr. KELLOGG. Judge Raker, it looks to me a good deal like the war measures that we had up at one time——

Mr. RAKER (interposing). Why can not we get the services of the men already there?

Mr. ELSTON. It is merely a supplemental proposition, as I understand.

Mr. RAKER. I know. I am reading the statutes. I do not want to take the time of the committee but want to get fully before the committee that it is an entire change in principle. Here we started in hoping to get the benefit of the three departments mentioned, with their technical men and with their experience, and now we want to cast them all aside and create a new personnel on this water-power development, on which some or all of these departments have been engaged for the last 15 years, and made a success of it as far as we have gone.

The CHAIRMAN. I think we would have to get that from some other witness, perhaps.

Mr. RAKER. Perhaps so. But I wanted to know what prompted the witness to be here urging such an amendment.

Mr. KELLOGG. I will try to make that plain. It seems to me this is a good deal like the war emergency. This water-power development has been hanging fire for a decade in order to have the right bill agreed upon. During all that time the development of water power on public lands and on navigable streams controlled by the Federal Government has been almost nil, and my judgment would be, or my personal opinion is, that the reason for this great rush of applications at the very beginning under the new legislation is because there has been a tremendous lack of development for a decade past. And, furthermore, that this legislation furnished a method of getting rid of the existing power shortage, so that various people interested rushed in to act under the law.

It seems to me to be simply a practical business proposition, that it has created an emergency in the way of Federal service required which the existing departments (unless, as I said before, they are very much overmanned, which all deny) are incapable of handling, or at least are not manned to handle in an expeditious way. And this matter must be handled expeditiously unless a great deal of loss n waste of resources is to continue.

The CHAIRMAN. Anything more?

Mr. KELLOGG. I believe not.

The CHAIRMAN. We will next hear Mr. Walter L. Scott for a few moments. [After a pause.] He seems to be absent. We will next hear Mr. E. Elmer Smith.

STATEMENT OF MR. E. ELMER SMITH, PRESIDENT OF THE S. MORGAN SMITH CO., YORK, PA.

The CHAIRMAN. Please give to the reporter your name, business, and residence.

Mr. SMITH. My name is E. Elmer Smith, president of the S. Morgan Smith Co., York, Pa., and I am a member of a number of water-power organizations throughout the country.

I just wanted to speak a few words in reference to bill 15126, practically covering the same ground that Mr. Kellogg went over. We, as manufacturers of turbine water wheels and hydraulic machinery, have been doing practically nothing in the way of building water wheels for development purposes on the public domain, and simply for the reason that there has been nothing of that kind going on for the last 10 years. When the water-power bill was passed, I think in 1910, we all expected great development, but everything was stopped on account of certain conditions that developed in the bill. When this new bill was presented we, of course, looked for a very active line of work. And now, as I understand and as it appears to me, the applications for power are so numerous, covering such a tremendous ground of development, in all parts of the country and especially in the west, that the progress of the work is going to be held up unless some adequate provision is made for a suitable engineering staff of men competent to assist the commission in expediting this work.

I was very much impressed with what the three Secretaries said this morning in reference to this matter; and it seems to me, in fact I am convinced more than ever, that this bill ought to receive very favorable consideration at the hands of this committee. I say that because of the fact that in my opinion, from information I have received, pretty generally the men employed in these departments are hardly competent to handle this broad proposition. This development of hydraulic power is something more or less unusual, and I might say that it is a business in itself. Men have to be educated in this particular line of work, and they are not very numerous. Good men are hard to get; and I understand, from the salaries that men are being paid in the different departments, you can not get the necessary talent as you have not there the talent. That is a pretty broad statement to make, I admit, but I think there is a good deal of truth in it, and I believe that you will find it pretty generally true if you will investigate the situation.

I know that I have employed engineers, paying them anywhere from \$10,000 to \$15,000 a year, in order to get the kind of service necessary to make reports on such development. It takes time to make them, and they must be very accurately made to be of any benefit, in order to take no chances on them. Development of water power is a business that involves many millions of dollars, at least in a development of any magnitude. And the work calls, in my opinion, for men of the highest talent. I am pretty sure that you have not got that talent in the different departments now. Therefore I feel that this bill ought to receive very favorable consideration. I think the business warrants a competent engineering department of its own, men that you can draw from at all times, when you want them.

The CHAIRMAN. Any questions?

Mr. RAKER. What about the engineers in the Reclamation Service?

Mr. SMITH. You have got good engineers in the Reclamation Service, but I understand they are not numerous enough to handle this proposition on the basis that is being presented to this commission.

Mr. RAKER. What is the matter with the engineers who have been handling this subject for the last 15 years in the Department of Agriculture, and who have demonstrated their work? There are to-day going plants based upon permits which were obtained under the Forestry Service?

Mr. SMITH. Outside of the Reclamation Service I question whether there are many men available for this particular line of work.

Mr. RAKER. Then really, as a matter of fact, your theory is that you want to get new men in this commission?

Mr. SMITH. I think it will be a profitable investment to put competent men, and plenty of them, in back of this thing, in order to get it moving in a business-like way.

Mr. SINNOTT. What would be a fair salary to pay such a man as you have in mind?

Mr. SMITH. I know that you will have to pay as much as—well for a good man you will have to pay as much as \$10,000.

Mr. SINNOTT. How many \$10,000 men will be needed?

Mr. SMITH. That depends upon the projects presented. I understand that there are 100 or more of them before the commission. Of course they are not all active. I judge, from the applications

that have been made, there will be a good many of them that will require men of extraordinary talent. Of course, you do not have to have every man of \$10,000 or \$15,000 capacity. You can have subordinates and they can report to him and can act under his direction; but when it comes to the vital point of making decisions and making investigations, then you must have a man who has had experience and possesses the talent and who can give you the information that you can rely on.

Mr. SINNOTT. What would be the scope of this man's duties that you have in mind; what would he have to do?

Mr. SMITH. He would go out and look over these propositions and pass upon the plans, and the general project as it may be presented to him. No ordinary man can do that. He must be a man not only of pretty high ability, but of experience.

Mr. RAKER. To get back to the first proposition, you said that up to 1912, when that other bill was passed, or, rather, after that time you thought development was going to be had and would have been had except for one provision; what was that provision?

Mr. SMITH. The provision that the financial people objected to.

Mr. RAKER. What was it?

Mr. SMITH. Giving the Government the right to confiscate property without paying the value thereof.

Mr. RAKER. It was a revocable permit.

Mr. SMITH. Yes, sir; I think so, but I can not recall it right now.

Mr. RAKER. That was it, the revocable feature of the permit, by which the Secretary could withdraw the permit if he saw fit so to do.

Mr. SMITH. Yes, sir; that was the principal objection to the bill I think.

Mr. RAKER. Was there anything outside of that?

Mr. SMITH. I think, not, particularly.

The CHAIRMAN. What was that?

Mr. RAKER. The Secretary of Agriculture and the Secretary of the Interior had the right to revoke permits, and that was one of the things they wanted to get rid of. They wanted an everlasting concession and did not get it, and then some people went ahead and some did not.

Mr. Smith, just where in California are plants held up by this situation to which you refer?

Mr. SMITH. I do not know of any in California. I think in California a good many developments are not on navigable streams.

Mr. RAKER. I am talking about on public lands.

Mr. SMITH. The work is going along very speedily out there, but there are a lot in the East on different rivers which are not going ahead.

Mr. RAKER. You folks would not rely on the report of an engineer of the Government anyhow. You make your application to the Water Power Commission, and the matter goes over to the Secretary and he passes upon it, and then you, through your engineers, would determine whether or not you could do the work?

Mr. SMITH. Yes, sir.

Mr. RAKER. Irrespective of what the Government's engineer said, your organization would rely upon your own high-class, highly paid engineers?

Mr. SMITH. Yes; that is right.

Mr. RAKER. So I do not get the point that you want to get a new commission and take these men who have had experience in the Department of Agriculture and the Department of the Interior away from the work, cast them out, and put new men in their places.

Mr. SMITH. If you have men in those departments who are competent to pass on these different propositions speedily, that is all right. But, as I understand the situation, these different departments have not got the men; in fact, good men are very hard to get.

Mr. RAKER. If those departments now can not get them, how is the Water Power Commission going to get them?

Mr. SMITH. I do not know. Probably they do not pay money enough. They are obtained in this line of work by engineering corporations engaged in water power development. The companies who are engaged in building this kind of work employ highly competent men. They can not afford to employ any other kind.

Mr. RAKER. For instance, the Secretary of Agriculture and the Secretary of the Interior have high-class engineers engaged in the same line of work, and they are among the highest class of men in the United States. You would not pay a man a higher salary because he was working for the Water Power Commission, would you? If these departments can not get the men, now how are you going to get them under the Water Power Commission?

Mr. SMITH. It is a question of whether you can get such men in the departments at the salaries you are paying, I mean men necessary for this class of work. It is a very valuable work, and a work from which the Government expects to realize very largely, and a work absolutely essential to the country.

Mr. RAKER. The Government is not going to realize from it.

Mr. SMITH. The Government is going to get a rental for the power developed. It is to the Government's interest that developments should be successful.

Mr. RAKER. Let me ask you this question, and I will not take up much more of your time. If a man has been competent and capable to pass upon this water power development on the great public domain, that within the natural forests, and has made a success, what difference is there in his passing upon these applications and bringing to fruition the powers that have been granted in the past, how would there be any difference under the proposed law?

Mr. SMITH. If you have men who are competent, if you have men who have passed on these different propositions, and they have been successful, doubtless so far as they could fill the need they would be all right to do this work. But you haven't such men in sufficient numbers to meet the demands that are suddenly put upon the Water Power Commission. As long as you have competency that is all you need. But as I gathered this morning from the statements of the three Secretaries, these men are not available. The three Secretaries sat right at this table and stated that men are not available, that they do not have them.

Mr. RAKER. And they put that on the ground that they did not have the money.

Mr. SMITH. I rather inferred that there were other reasons.

Mr. RAKER. If a man was competent to do the work under the law as it stood before, which I take it is a fact, the law relative to

hydroelectric development on the public domain, or in the natural forests, is there anything peculiar or different in this bill than existed before that would take care of this situation in a better way?

Mr. SMITH. I do not recall but one or two developments that the Government has made of any particular magnitude; and even then there was just one going on at a time, not requiring very many men. There are applications before the Water Power Commission that aggregate hundreds of millions of dollars; how are you going to pass on them with any ordinary force with the speed that they require?

The CHAIRMAN. Anything more? [After a pause.] Then we will hear the next witness.

Mr. SINNOTT. I would like to ask a question of Mr. Mather.

STATEMENT OF MR. STEPHEN T. MATHER, DIRECTOR, NATIONAL PARK SERVICE—Resumed.

The CHAIRMAN. Mr. Mather, Mr. Sinnott, of the committee, wishes to ask you a question or two.

Mr. SINNOTT. In view of Mr. Rogers's bill, No. 14760, are there any pending homestead or land applications in any of the national parks?

Mr. MATHER. No; they would not be considered, no new applications.

Mr. SINNOTT. All right.

Mr. MATHER. Do you mean, are there any pending that were started previously to the creation of the park?

Mr. SINNOTT. Yes. The reason I asked that question is that Mr. Rogers in his bill takes out from under the operation of the bill the natural parks, and as I recall the latter part of the water-power bill it preserves a certain right in homestead entries on water-power sites.

Mr. MATHER. I do not think that would be involved in this proposition, but I would not like to answer positively without consulting my legal assistant on that.

Mr. SINNOTT. I wondered whether in any newly-created parks there are any uncompleted homestead operations. If so they would be excluded by Mr. Rogers's bill.

Mr. MATHER. The only thing I can think of is in the Rocky Mountain Park, where some applications are being completed under the timber and stone act. In that case decision has been made in favor of the entryman, and the case will be complete in a very few weeks. Outside of that I think there is no property in addition.

Mr. SINNOTT. All right.

STATEMENT OF MR. O. C. MERRILL, EXECUTIVE SECRETARY FEDERAL POWER COMMISSION, WASHINGTON, D. C.

The CHAIRMAN. Mr. Merrill, please give your name, state your position and residence, and so on to the reporter.

Mr. MERRILL. O. C. Merrill, executive secretary Federal Power Commission, Washington, D. C.

The CHAIRMAN. You may make your statement.

Mr. MERRILL. Mr Chairman, and gentlemen of the committee, I judge, largely from conversation that I have had with various Members of the Congress, that there is still considerable misunderstanding concerning the situation that exists with respect to the Federal Power Commission. The three departments, Agriculture, Interior, and War, handled water powers on the national forests, on the public lands, and on the navigable rivers for the 20 years preceding the passage of the Federal water power act. In that time they had applications before them for approximately 2,500,000 horsepower. In six months the Federal Power Commission has received applications for 12,500,000 horsepower, or five times as much as the three departments received in the previous 20 years.

Mr. SINNOTT. Do you mean applications?

Mr. MERRILL. Yes. As measured by the amount of horsepower represented by the applications before them. If we were to proceed in the future at the same rate of progress as in the past, and with no more personnel than was had in the past, we would have 100 years' work ahead of us, even if we had nothing more to do with respect to each application than the departments have had to do in the past.

Let me speak for a moment on what 12,500,000 horsepower means: It means from 40 to 50 per cent more than the total water horsepower which we have developed in the United States up to date. It means an amount equal to the aggregate water power, steam power, and gas power installed in central electric stations—both municipal and private—in the United States up to the time of the census report of 1917. It means 75 per cent of the developed water power of the world. It is greater in amount than the potential resources of any European nation. Not only do we have before us this great volume of work, but the new law puts duties on the commission that were never placed upon the individual departments.

The Department of Agriculture received applications under the act of 1901. They examined them and checked them up to see that they contained proper descriptions of the public lands. Provisions were made concerning the time in which the work was to be commenced and completed, an annual rental charge was prescribed, and then a permit was issued. The Interior Department did likewise. The War Department has had practically no business before it for 10 years, because, since the passage of the act of 1910, less than 50,000 horsepower has been developed on the navigable rivers of the United States.

Under the new act we have not only to do what the several departments have hitherto done, but we are required, among other things, to determine that every project which comes before us is so located and designed as to be consistent with a comprehensive scheme of development of the water resources of the stream which shall take into account not only water power, but navigation, irrigation, and all other beneficial uses. The departments never had to do that before, and never did it. We are required to pass in detail upon the plans presented—structural details, mechanical details, electrical details. This has never been done before except in rare instances. We are required to establish a system of public utility accounting for all licenses under the provisions of the act. It has never been attempted before. We are required to value properties licensed under

previous laws which may come under the new law. This has never been done by any of the departments before.

We are required to exercise sufficient supervision over project works to assure their adequate maintenance and efficient operation and to prescribe the amounts which shall be set aside into depreciation reserves to take care of deferred maintenance and of replacement of structures or equipment worn out in service. This has never been done before. We are required to regulate rates, service, and securities in intrastate business wherever the several States have not provided agencies for performing such duties themselves and in interstate business whenever the individual States have not the power to act or can not agree. This has never been done by the Federal Government before. Whenever a licensee makes use of a headwater improvement of another licensee or of the United States we are required to determine the proper share of the annual costs of such improvements which shall be paid by the licensee benefited. This has never been done before.

Particular emphasis should be placed upon the duties of the commission with respect to passing upon the design and cost of project works, upon property valuation, and upon the formulation and administration of the accounting system. Certain of the projects applied for exceed in magnitude anything yet attempted in the world in connection with power development. Their cost will run into hundreds of millions of dollars. The design of the structures determines not only the extent and the efficiency of the utilization of the resources but the cost of the project as well. Every dollar of such cost, which the commission allows to be entered upon the property investment account of these licensees, is a potential liability of the United States, for it determines the price at which the United States may take over the properties at the termination of the license period. An intelligent, expert supervision over the design and construction of project works is, therefore, essential. A similar attitude must be taken toward additions and betterments of project works, and toward maintenance and replacement.

The accounting system will determine how the various items of expense shall be charged upon the books of the licensee, how depreciation reserves shall be maintained and disposed of, and how and when the amortization reserves required under section 10 (d) of the act shall be created and applied. Both reserves affect the price which must be paid for the properties. The accounting system will also determine currently the property investment, the revenues and expenses and the classification of each, the rate of return which is being earned, and all the other data which will be necessary not only for fixing the price to be paid for the properties if taken over by the United States or by any other agency, public or private, but also for fixing the amount upon which service charges may be based during the period of the license. Finally, the valuations which must be made under the provisions of section 23 of the act will determine the "fair value" of hundreds of millions of dollars worth of existing property which will be allowed to go upon the books of licensees as their "net investment" when licenses for such projects are issued.

The determination of values and the creation and administration of the accounting system on correct principles is of more importance in connection with power projects under the Federal water power act than the similar functions exercised by the Interstate Commerce

Commission with respect to railroads; for while the findings of the Interstate Commerce Commission are evidence of the facts, to be taken into consideration in rate making proceedings, the findings of the Federal Power Commission under the provisions of its law are the facts themselves upon which not only may rates be regulated but also purchase effected. The difference between an administration of the act through a personnel trained and experienced in the duties to be performed and a personnel neither trained nor experienced may well mean a difference of hundreds of millions of dollars in the potential liabilities assumed by the United States in connection with the projects already before the commission.

There are many other new duties or requirements of lesser importance, but I think it may fairly be said that the extent of the responsibility and the amount of work which the commission has with respect to every application brought before it, is at least five times greater than was ever exercised by the other departments in the business which they have handled in the past. I will attach a statement setting forth these duties in detail.

Mr. SINNOTT. What is your present force?

Mr. MERRILL. The present force that the commission has?

Mr. SINNOTT. Yes.

Mr. MERRILL. Myself and an engineer officer from the Department of War.

Mr. SMITH. An engineer officer from where?

Mr. MERRILL. From the War Department.

Mr. SMITH. An Army officer.

Mr. MERRILL. Yes, sir.

Mr. SINNOTT. You have a stenographer, probably?

Mr. MERRILL. No, sir; we have no authority under this act to employ a clerk or a messenger or a single individual other than myself.

Mr. RAKER. But haven't you brought in some other departments, other personnel?

Mr. MERRILL. Yes, sir; I understood the question to be what personnel have we authority to employ. The act provided that the work of the commission should be done through the Departments of Agriculture, Interior, and War, and their engineering, technical and other personnel. We have drawn personnel from the three departments in the District of Columbia. We are also utilizing the field forces of the three departments, and they are the only field forces we have. We have drafted from the Department of Agriculture three times the personnel that they used on that work before the passage of this act. The Washington office of that department had formerly a salary liability of \$5,500 a year. It is carrying now a salary liability of \$18,830 and it is a charge against the Secretary's Office, the Forest Service, the Bureau of Markets, the Bureau of Entomology, the States Relations Service, and the Bureau of Public Roads. We have a personnel carried against the Interior Department involving \$19,700. We have drawn from the War Department a personnel involving a liability against that department of \$34,240. So that the total personnel we have drawn from the three departments represent 31 individuals, with a total liability against the three departments of \$72,770, which is considerably in excess of the similar liabilities in the past.

Mr. RAKER. Have you the names and amounts?

Mr. MERRILL. Yes, sir.

Mr. RAKER. Will you insert them in the records?

Mr. MERRILL. Yes, sir.

Mr. RAKER. Does that bring forward all the high-class men?

Mr. MERRILL. It brings in all they had available for the work; from the Department of Agriculture not only all they had but even more, and similarly from the Department of Interior and the Department of War.

Mr. RAKER. All right, put them in.

Mr. MERRILL. I will be glad to do so.

(The statement, afterwards furnished by the witness, is here printed in full in the record, as follows:)

Personnel detailed or assigned to Federal Power Commission by Departments of War, Interior, and Agriculture.

Position in commission.	Department.	Bureau.	Incumbent.	Base compensation.	Date of assignment or detail.
ENGINEERING.					
Chief engineer.....	War.....	Engineers.....	Lieut. Col. Wm. Kelly.....	¹ \$6, 120	Sept. 1
Assistant engineer.....	do.....	do.....	Maj. H. Bennion.....	¹ 5, 300	Oct. 21
Do.....	do.....	do.....	Capt. M. J. Noyes.....	¹ 3, 200	Nov. 24
Do.....	Interior.....	Geological Survey.....	R. W. Davenport.....	3, 240	Oct. 1
Do.....	do.....	Reclamation Service.....	E. C. Bebb.....	3, 000	Nov. 1
Do.....	Agriculture.....	Forest Service.....	R. R. Randell.....	3, 000	Aug. 16
Junior engineer.....	Interior.....	Geological Survey.....	David J. Guy.....	2, 100	Nov. 3
Draftsman.....	War.....	Air Service.....	F. D. Bradford.....	1, 800	Nov. 1
Do.....	Agriculture.....	Public Roads.....	L. H. Schlegel.....	1, 620	Oct. 27
LAW.					
Chief counsel.....	War.....	Judge Advocate General.....	Maj. Lewis Call.....	¹ 5, 000	Aug. 6
Attorney.....	Agriculture.....	Forest Service.....	J. F. Lawson.....	3, 250	Nov. 24
Assistant attorney.....	Interior.....	Solicitor's office.....	J. W. Mitchell.....	2, 000	Oct. 19
ACCOUNTS.					
Chief accountant.....	War.....	Engineers.....	Wm. V. King.....	7, 500	Oct. 27
Assistant accountant.....	Agriculture.....	Forest Service.....	Chas. W. Friede.....	3, 600	Nov. 11
OPERATION.					
Chief clerk.....	Interior.....	Reclamation Service.....	F. W. Griffith.....	2, 400	Aug. 21
Clerk-stenographer.....	do.....	Geological Survey.....	Miss M. Thorwarth.....	1, 620	Oct. 25
Do.....	do.....	Indian Office.....	Lee Morris.....	1, 600	Nov. 1
Do.....	do.....	Reclamation Service.....	Miss M. Napier.....	1, 440	Aug. 18
Do.....	Agriculture.....	Forest Service.....	Miss M. Waters.....	1, 400	Aug. 1
Do.....	do.....	Bureau of Markets.....	Miss S. Kent.....	1, 400	Oct. 22
Librarian.....	War.....	Quartermaster.....	Miss M. Ripplier.....	1, 200	Oct. 21
Clerk-stenographer.....	do.....	Engineers.....	Miss N. Gibson.....	1, 200	Sept. 2
Do.....	Agriculture.....	Forest Service.....	Mrs. M. Ward.....	1, 200	Oct. 18
Do.....	do.....	Entomology.....	Miss A. M. Winningham.....	1, 200	Oct. 25
Do.....	War.....	Air Service.....	Miss D. Dryer.....	1, 200	Nov. 1
Do.....	Agriculture.....	States Relations.....	Miss M. Simpson.....	1, 200	Nov. 4
Do.....	Interior.....	General Land Office.....	Mrs. L. Groat.....	1, 200	Nov. 15
Do.....	War.....	Engineers.....	Mrs. M. Sexton.....	1, 200	Sept. 8
Do.....	Interior.....	Reclamation Service.....	Mrs. A. L. Gudyer.....	1, 100	Dec. 2
Messenger boy.....	Agriculture.....	Secretary's Office.....	Edward Krause.....	480	Sept. 14
Do.....	do.....	do.....	Thomas Larkin.....	480	Nov. 29

¹ Approximate value of salary and all allowances.

Carried by Department of Agriculture, 11 employees aggregating.....	\$18, 830
Carried by Department of Interior, 10 employees aggregating.....	19, 700
Carried by Department of War, 10 employees aggregating.....	34, 240
Total, 31 employees.....	72, 770

Mr. RAKER. Why do not they have civil-service examinations and bring more men and women in?

Mr. MERRILL. They would have to pay for such personnel out of appropriations granted by you gentlemen for entirely different purposes. Congress has made no appropriations to these departments to increase their personnel employed on water-power work. Such increase would, therefore, mean dropping other work which Congress has authorized and directed to be done. An examination of the table I have inserted will show the degree to which the departments have already drawn upon such appropriations to meet the emergency which has faced the commission. In several instances these positions are being financed only from month to month in the expectation that the commission will be given authority to use its own appropriations for the employment of its own personnel. If this is not done, we have no assurance that these assignments will be continued.

Mr. TAYLOR. If you put on a hundred men at \$10,000 for these hundred projects, and put them into this commission, they would be there for life, and we would never on earth be able to get rid of them. That is the trouble with all these bureaus, that whenever you create one they grow like mushrooms, they are there forever, no matter if the work has disappeared.

Mr. MERRILL. I have never been sanguine enough to believe I could get even one at \$10,000.

Mr. TAYLOR. I have never heard of a Government official being dismissed or being gotten off the pay roll once he got on there, and they stay there forever. I was wondering if we could not provide some limitation on the demands on the Federal Treasury.

Mr. MERRILL. There must be justification for keeping them, if they stay. If there was only temporary work to do of course they would have to go when it is done. But you might just as well expect the Interstate Commerce Commission to go out among the departments and borrow men temporarily to do their work as to expect us to be able to do it for our work. I am afraid, however, that you are not familiar with the extent to which the technical men are leaving the Government service. They are not staying. They are leaving by the hundreds. At no time during the eleven years I have been in the Government service has it been so difficult to get or to hold competent, technical men as in the last three years. The technical services of the Government are breaking down because of the impossibility of securing or keeping a competent personnel at the salaries these services are permitted to pay.

Mr. TAYLOR. Do you mean to say that you will have to have 100 men or more at \$10,000 a year to continue on after this work has been closed up?

Mr. MERRILL. No, sir; not after it is closed up, or at any other time.

Mr. TAYLOR. Suppose it is closed up in the next two years, would you still have to have them on?

Mr. MERRILL. I do not consider that this work will be closed up in the next two years, but whether it is or not, so long as I am responsible for the work I shall not retain any man at any salary whose services are not needed.

Mr. TAYLOR. At the same time they will be passed on?

Mr. MERRILL. Certainly; but new applications are coming in now at the rate of one a day, and have been for months.

Mr. TAYLOR. Do you apprehend that there will be this numerous flood of applications all along?

Mr. MERRILL. Not the number that we are receiving now, but under any personnel I would hope to be able to get there are years of work ahead.

Mr. TAYLOR. I assume that no one would object or could object as a business proposition to furnishing an ample supply of skilled employees for actual and necessary work. But I have a kind of dread of a cart blanche authority granted by the Congress to put on an unlimited personnel and pay unlimited prices, and I see no limitation in this proposed bill.

Mr. MERRILL. We have not put any limitation here, Mr. Taylor, simply because this is a general authorization that we have to have before we can appear before the Committee on Appropriations. When we go to the Committee on Appropriations then we will have to set up our personnel proposals.

Mr. TAYLOR. Why wouldn't it be well to show some kind of limitation on yourself here?

Mr. MERRILL. It is all in the Book of Estimates.

Mr. TAYLOR. I know, but in this proposed law that you are applying for now?

Mr. MERRILL. I don't care whether you put on a limitation or not, if you put on a reasonable limit under which we may get men competent to do the work.

Mr. RAKER. Have you had any trouble in the Department of Agriculture or in the Department of the Interior under civil-service examinations in getting this class of men? Do you get them into those departments now?

Mr. MERRILL. The Department of Agriculture, if it had the funds for that purpose, I assume could call for an electrical engineer, or a mechanical engineer, and put him on the pay roll, even though they never used him after he got there, but assigned him to the work of the commission, provided the department on work of its own required men of the same character.

Mr. RAKER. I want to assume for the purposes of my question that they have a sufficient amount of money. Let us make that assumption. Is there any question as to calling enough of these men and women into those two departments over there to work as well as they would work for the Federal Power Commission?

Mr. MERRILL. There is in the Department of Agriculture.

Mr. RAKER. Why not?

Mr. MERRILL. First, because the Comptroller of the Treasury has ruled that while any department, if it has no men in any grade or class which it can spare for the work of the commission, may employ additional persons in such grade or class and then assign them to the performance of such work as the commission may specifically request such department to do, it may not employ in any grade or class not required in its own work any person for purposes of assignment to the work of the commission. And second, because the Department of Agriculture has a salary limit of \$4,500, and there are certain positions to be filled that can not be filled at any such a figure.

Mr. RAKER. On the Federal Power Commission?

Mr. MERRILL. Yes, sir; on the staff of the commission.

Mr. RAKER. What do you mean?

Mr. MERRILL. One of the jobs at the present time is that of valuing \$150,000,000 worth of property. The Interstate Commerce Commission pays salaries ranging from \$6,500 to \$10,000 for positions of similar character. We can not hope to get competent men at \$4,500.

Mr. RAKER. One of the things you are trying to do is to get outside men in and pay higher prices?

Mr. MERRILL. No, sir. Only to the extent that we can not get them inside. We have already taken such men as the three departments had and could spare and the departments in addition have gone out and gotten other men and assigned them to the Federal Power Commission in order to give us even the personnel we now have.

Mr. RAKER. What particular work is there that you can not have done at that price?

Mr. MERRILL. You can not get a valuation engineer at \$4,500 who could do valuation work on these projects.

Mr. RAKER. Which project do you speak of?

Mr. MERRILL. We already have pending some 14 cases requiring valuations, involving 738,000 horsepower and probably not less than \$150,000,000. Among these are the properties of the hydroelectric developments on the American side at Niagara Falls.

Mr. RAKER. Did not the War Department have that under its supervision before?

Mr. MERRILL. Whatever supervision was exercised was exercised by the War Department.

Mr. RAKER. Didn't it have under it personnel of the highest ability, men rated at the highest ability as engineers anywhere in the world, and aren't they there yet?

Mr. MERRILL. It has not done any work of that character.

Mr. RAKER. They could be transferred from that department to this department. Lots of those men have been turned loose, discharged, and they can recall them. They are engineers of the highest ability of any in the world; you can not beat them, and they can certainly do that work.

Mr. MERRILL. They have never done any work of that kind in the Department of War.

The CHAIRMAN. There is no law requiring the Department of War to do that, is there?

Mr. MERRILL. No, sir.

Mr. WINSLOW. What do you pay by way of per diem and allowance?

Mr. MERRILL. We have a statutory limit of \$4 a day.

Mr. SINNOTT. Have you granted any permits?

Mr. MERRILL. We have not.

Mr. SINNOTT. Or any licenses?

Mr. MERRILL. No, sir.

Mr. SINNOTT. Can not all this force do anything?

Mr. MERRILL. They have done work right along, on time and overtime.

Mr. SINNOTT. And you have not given out one permit with all this force that you have on hand?

Mr. MERRILL. We have to do many things before we can grant a permit. We have to draft regulations. We have to advertise, under the provisions of the law, eight weeks in the public press. We have to call for field reports, and we have had no one to call on except the men in the department.

Mr. SINNOTT. When was this law enacted?

Mr. MERRILL. June 10.

Mr. SINNOTT. You have been six months on this work and have done nothing?

Mr. MERRILL. We have done many things, notwithstanding the long delay in securing assignments of personnel.

Mr. SINNOTT. At that rate it seems to me it would take 100 years if we gave you 100 men.

Mr. MERRILL. While we have a personnel of 31 at the present time they have not been available for the full period of six months. In fact, the average period of assignment has been only 59 working days. When the commission organized early in July it had no force and no quarters. The first work started was the drafting of regulations covering applications for permits and licenses and related matters. This was done through an interdepartmental committee. Extended public hearings were held and the regulations were adopted on September 3. The Engineer officer was unable to report until September 1. The Committee on Buildings and Grounds did not make space available for the offices of the commission until the middle of October. In order to ascertain its authority to employ certain personnel it was necessary for the commission to await the interpretation of the law by the Comptroller of the Treasury. It has been necessary also to return to the applicants more than 80 per cent of the applications submitted in order that additional data might be supplied. Only 44 of the 146 projects applied for are complete at the present time.

For the examination of all these applications, for the preparation of the engineering section of the regulations, and for many the other administrative matters which involve engineering questions, there have been only seven engineers available, and these have been on duty an average period of only 60 working days. The act requires every application to be advertised for a period of eight weeks before any action can be taken, and after the advertising period has expired public hearings are to be held when requested. Projects are not advertised unless the applications are sufficiently complete to indicate the character and extent of development proposed. Forty-seven projects have been advertised to date, and on only four of these has the period of advertising expired, the earliest on December 7, the latest on December 18. On none of these four projects have field reports yet been received. On two, the applicants have not yet filed the necessary plans, and on the fourth a public hearing has been requested. Action upon applications under the new law is far from being the simple matter it was under previous laws.

Mr. RAKER. The only point in my question is, I have heard a great deal of talk about economy but have not seen any evidence of it anywhere. I was just in hopes there might be some disposition here to economize somewhere.

The CHAIRMAN. I think this is a poor place to try to economize, perhaps. It is a growing department, one which is just being

organized, and which has a tremendous field of work before it, and which has not yet a trained personnel, and can not secure a personnel at the present rates of salaries. It is a law which will become self-sustaining, which is a thing you can not say about most other laws the Congress enacts; and the sooner these permits are granted, and works are put into operation the sooner a rental will come in to the Government to reimburse the Government for its outlay.

Mr. RAKER. I think it is fair to say this in addition to what the Chairman has said, that while it may be self-sustaining, nevertheless the people who get these contracts get very extended tracts of land, public land, and take it from taxation, and we do not even get taxes from it.

The CHAIRMAN. They have to pay the Government a rental for the use of the public lands. The bill so provides, and that produces another source of revenue.

Mr. TAYLOR. Of course we all want to make the law effective.

The CHAIRMAN. Yes, and as early as possible.

Mr. TAYLOR. Yes; but we don't want to throw the doors wide open for these departments to grow abnormally on what they feed upon, you might say, and then for them to go to the blue-sky limit with new employees, and pay salaries without any check on them. It would bankrupt seventeen Governments.

The CHAIRMAN. Our action is viséed by the Committee on Appropriations. We have no final say on that matter.

Mr. TAYLOR. I am very familiar with the Forestry Service, and we started in a few years ago by Mr. Pinchot saying it would be self-supporting, and that he only wanted a few thousands of dollars, and they got a couple of hundred thousand dollars, and then it got up to half a million dollars, and then on to a million dollars, and now they have to have \$7,500,000 a year appropriated by the Congress to keep it going.

The CHAIRMAN. How much comes back to the Treasury?

Mr. TAYLOR. About \$3,000,000.

Mr. MERRILL. I want to say that in my judgment to proceed to operate a law of this character under personnel scattered around through the various departments and bureaus in the city of Washington would be about as economical and about as practical as to attempt to run the hotel down here on the Plaza if its kitchen was in Anacostia, its dining room in Georgetown, and its office in Chevy Chase. In such a condition there would be no way of getting any supervision over the work. We have taken into the commission, into its offices and under my direction, such personnel as the departments were willing to give us; and they have, as I said, gone to a considerable degree beyond any liability they had previously assumed in connection with water-power administration. We have before us now a job such as never confronted in the slightest degree any of the departments hitherto.

We have to do one of two things: (1) We must either have a sufficient personnel to operate this law; or (2) allow the situation to continue in the future as it has in the past, with our water powers tied up. Everything was stopped for 10 years because we had no legislation. I do not believe it will be your judgment, having enacted legislation, that we should stop for another 10 years just because we can not have the means to put the law into effect.

Mr. TAYLOR. Before the Water Power Committee, in that elaborate hearing, there was a very strong effort to consolidate this commission into one department, wasn't there?

Mr. MERRILL. There was, to a certain extent.

Mr. TAYLOR. Then there was an effort to put it all under an executive of some kind, but the sentiment of the country was that the water powers of the country, of the United States, were so valuable, and the responsibility so far-reaching, and it was such a tremendously important matter that it was not really safe to allow it all to go into the hands of one individual, and we thought we ought to hold these three Secretaries responsible for this great work. Wasn't that the theory, and wasn't that what the committee finally decided upon?

Mr. MERRILL. That is what was done.

Mr. TAYLOR. Aren't you trying to get away from that?

Mr. MERRILL. Not at all.

Mr. TAYLOR. Isn't that the ultimate object or tendency or inevitable result of this movement now on?

Mr. MERRILL. Not at all. The three members of that commission are just as much responsible for the work of their employees, of the men who are directly under them, as they are of the work in their own departments.

Mr. TAYLOR. Who gets all these employees?

Mr. MERRILL. Through the commission.

Mr. TAYLOR. I know, but who gets them?

Mr. MERRILL. Do you mean, who is the individual who does it?

Mr. TAYLOR. Yes.

Mr. MERRILL. I am the responsible officer of the commission.

Mr. TAYLOR. Are you the one to employ engineers?

Mr. MERRILL. I am.

Mr. RAKER. Are you opposed to having them classified under the civil service?

Mr. MERRILL. Not at all. I assume that under the language in the bill before you, all personnel will be put under civil service. The Civil Service Commission ruled that I, whose appointment is provided for under this act, am under civil service rules, and that the appointment must be made a civil service appointment. That was done although the position was specifically named in the act.

The CHAIRMAN. I think the employees would fall into the classified service, and from that fact they are subject to the civil service rules. But that may not cover the experts that you wish to get.

Mr. TAYLOR. I think that they are right on there for life whenever you employ one.

Mr. MERRILL. I certainly do not object to your enacting a provision that they shall be under the civil service.

Mr. SMITH. Do you think that you can get as competent engineers under civil service rules as by securing men from business corporations who employ them?

Mr. MERRILL. No.

Mr. SMITH. Then why do you say you are willing?

Mr. MERRILL. I say I have no objection, because that is the way it is usually done.

Mr. SINNOTT. This bill 15126 is reenacting section 2 of the Water Power Act. What is new in the way of language there?

Mr. MERRILL. There is certain new language placed in the first paragraph by the order of the commission. That was discussed this morning by the Secretary of War. Beginning at line 9, it says, "in the performance of its work the commission shall utilize"—

Mr. SINNOTT (interposing). What page are you reading from?

Mr. MERRILL. The second page.

Mr. SINNOTT. Here I find in the copy I have it begins at line 11.

Mr. MERRILL. On the copy I have here of that bill it begins at line 9.

The CHAIRMAN. There was a new print. I offered it on the floor December 30 myself.

Mr. MERRILL. I have not the other print. But beginning at line 9, it says—

In the performance of its work the commission shall utilize in so far as practicable the field offices and field personnel of the Departments of War, Interior, and Agriculture, and it is authorized to employ in the District of Columbia and elsewhere such expert, technical, clerical, and other personnel as may be necessary for the purpose of performing the duties imposed by this act, and as may be from time to time appropriated for by Congress.

That is for the reason that we believed the Washington personnel should be directly under the control of the commission, so as to handle the work efficiently and economically.

Mr. SINNOTT. Field offices and field men is language that is in the old bill.

Mr. MERRILL. We use now and purpose to continue to use the field offices and personnel of the Departments of Agriculture, Interior, and War.

Mr. SINNOTT. The only new language is "so far as practicable"?

Mr. MERRILL. And the word "field." And there is new language beginning on line 12 of this print—

And it is authorized to employ in the District of Columbia and elsewhere such expert, technical, clerical, and other personnel as may be necessary for the purpose of performing the duties imposed by this act, and as may be from time to time appropriated for by Congress.

Mr. SINNOTT. That is all new language?

Mr. MERRILL. Yes, sir.

Mr. SINNOTT. What follows is new?

Mr. MERRILL. Yes, sir; it is—

The detail of persons for such purpose from the Departments of War, Interior, and Agriculture, or the transfer from such departments of any persons engaged in duties which by this act are conferred upon the commission is hereby authorized.

Mr. SINNOTT. That is new?

Mr. MERRILL. Yes, sir.

Mr. SINNOTT. You did not read the word "Agriculture" as I heard. Did you omit it inadvertently?

Mr. MERRILL. Yes, sir. And it goes on—

And the restrictions on transfers from one executive department or independent establishment to another imposed by the acts of Congress approved June 22, 1906, and October 6, 1917, shall not apply to such transfers so made.

That I would like to explain.

Mr. SINNOTT. That is new language?

Mr. MERRILL. Yes, sir. We have now assigned to the commission certain individuals who have been employed by the departments

specifically for the purpose of assigning them to the commission. We believe, as I stated, that the only economical and efficient way to operate the office of the commission in the District of Columbia is to have its personnel directly under the commission. Those individuals are carried now on the rolls of the several departments.

Under existing law they could not be transferred for three years, because they either have been employed or transferred from some other department at a recent date. If the commission is given authority to employ personnel and to transfer individuals from other organizations and if the restrictions named are not removed, either one or the other of two things will happen: (1) the commission will have to drop the men it now has and start over and get new men; or (2) the departments must carry them on their rolls for three years. One of two men, in whom I am particularly interested, is carried on the rolls of the Department of Agriculture and the other on the rolls of the War Department. The Department of Agriculture is financing the assignment from month to month in the hope that some means will be adopted by which the commission itself can take over the charge. Unless, therefore, we have this legislation we stand to lose these men who have been working with us for months, and they are the chief accountant and the assistant accountant, without whose work we would be completely at a standstill.

Mr. RAKER. Why do you say you stand to lose them?

Mr. MERRILL. The departments will be unwilling to carry them indefinitely on their rolls if they are not working in the department, and must be paid out of appropriations authorized by the Congress for other purposes and which the departments need for such purposes.

Mr. RAKER. I can not yet get it through my head what difference it makes if a man is employed in the Department of Agriculture for a certain purpose, especially inasmuch as this commission is allowed to call on the Department of Agriculture for that man, or any other man in the Department of Agriculture; and if the man is thus employed I can not understand how he can do different work or better work or would be able to do more work if he were employed under this act if it became a law. I frankly state I am seeking information.

Mr. MERRILL. This is the situation, Judge, the secretaries of the Departments of War, Interior, and Agriculture form this commission. It is the duty of those department heads, both as department heads and as members of this commission, to decide whether they will give preference to the work of the commission or to the work of their departments, both of which they are required to do by Congress, but both of which they can not, in fact, do. Now, they have decided, up to the extent of the personnel now assigned and for the period necessary for the commission to receive authorization from Congress to use its own appropriation, that they will let their departmental work go, and will do the work of the commission. As I said awhile ago, the Department of Agriculture is carrying for the commission in the District of Columbia a salary liability of over \$18,000 for men who are doing no work for the department. This is \$13,000 more than the department spent on similar activities, and by so much must they curtail their own work which they have been authorized and directed by Congress to perform.

Mr. RAKER. What difference does it make? It is to coordinate, harmonize, and keep these departments all together, and keep plenty of work for the men so they will have plenty of work to do, so that when the work lags in one they can be put to the other work as it increases, and so on.

Mr. MERRILL. There is no lack of work to be done. In so far as they supply personnel to the commission, they must drop work of their own. Furthermore, it is not a mere question of assigning individuals already in the departments. Certain of the duties of the commission require individuals of a character that the departments do not have.

Mr. RAKER. I just want to know what particular class of man or woman that is needed in this great Federal Power Commission that isn't found or can't be found in one of the departments. I would like to have you describe him or her.

Mr. MERRILL. Very well, I will give you an example now. We are required under the provisions of this act to establish a system of public utility accounting for all licenses. A system similar to that prescribed by the railroad commission in your State, the State of California, and in other States. That system has to be established in conformity, as far as practicable, with the existing state systems. Nobody has ever been employed in the Department of War, Interior, or Agriculture who has ever had any experience in such work.

Mr. RAKER. But bless your life, don't they have a system of accounting in the great Department of War that equals any State? Then if they haven't oughtn't they go to a State and find out and have men that are competent for public accounting?

Mr. MERRILL. Certainly not, Judge Raker. It is absolutely a different type of accounting. They only account for receipts and expenditures in the Government departments. They never keep cost accounting, or if they do, it is of a different character. They do not have to account for operating revenue or operating expenses, for depreciation, for sinking funds, or for the many other items that are involved in public utility accounting practice. It is absolutely a different kind of work and the only place in the Government of the United States where you could get a man of that kind is the Interstate Commerce Commission. I went to them and asked them if they would not under the provisions of this act, which permits temporary detail, detail us a man that would help establish an accounting system and they said they were utterly unable to do so on account of the volume of the new work placed upon them by the recent transportation act; but that if we could get the money to pay the man when taken over so that they could use his salary to employ another, they would do it. We finally got the assistant director of their bureau of finance transferred to the War Department for this work and he is paid from the appropriations for the rivers and harbors. To accomplish this transfer took nearly two months of time, and required two decisions from the Comptroller of the Treasury. That is a sample of the handicaps under which the commission has been trying to get enough personnel to begin its work. No business organization would attempt to proceed on such basis for an hour.

The CHAIRMAN. Is there anything else you desire to say?

Mr. MERRILL. I wish to speak about a matter you were questioning this morning. This appropriation of \$100,000 on page 3. That

is the appropriation carried in the existing law and it is the only appropriation the commission has for the fiscal year. If you strike that out it closes the doors of the commission the moment the bill is signed, because there will not be a cent to operate on.

The CHAIRMAN. The sundry civil bill carries \$100,000 for the next fiscal year, but this is for the present year.

Mr. MERRILL. For the present fiscal year.

The CHAIRMAN. The question I had in mind is under the new rule, our authority to appropriate.

Mr. MERRILL. This is the existing law.

The CHAIRMAN. You copied the existing law?

Mr. MERRILL. Yes, sir. There are one or two points upon which I would like to touch briefly. In the paragraph on page 3 we have amplified somewhat the provisions concerning the character of expenses that are covered under the appropriation. We have added in the second line "personal services in the District of Columbia and elsewhere," as we felt such language would be needed if we employed personnel. We have also added "reimbursement of other Government departments or agencies for expenses incurred in the performance of work for the commission." We are at the present time paying travel and field expenses of the men in the three departments who are engaged in field investigations. We are not certain whether we have the authority to do it under the existing laws or not, but if the auditor rules otherwise, the departments themselves will have to pay it.

Mr. RAKER. This bill was intended to be worked through the three departments with the commissioners as the head and not to create a separate, independent outside commission, and I wonder if that is really the intent of this Federal water power bill.

Mr. MERRILL. Let me say this. We are not preparing to create any independent outside water-power commission. It will consist, as at present, of the heads of the three departments. We are merely creating a staff for performing the work of the commission. I presume it was the thought of Congress that since this work had formerly been done by the three departments, they could still continue to do it. But as I said awhile ago, the situation has completely changed. There is enough before the commission at the present time, if they work no faster than the departments worked in the past, to keep it busy for a hundred years. We not only have five times as much work right now, measured by horsepower alone as the three departments had in twenty years, but we also have many more duties to perform in connection with each application, and duties of a character never hitherto attempted by the departments.

Mr. RAKER. What is there in this statement, and I think it is applicable right here, that the three departments are honeycombed with idle people struggling to exist on doing nothing. Is there anything in that?

Mr. MERRILL. My experience and observation is limited to the Forest Service and, recently, to the Geological Survey. I know it is not true in the Forest Service and never has been true in that service. I have seen no evidence yet in the Geological Survey.

Mr. TAYLOR. There were 10,000 statements made in this recent campaign that there were 20, 30, and 40 thousand, and as high as

80,000 surplus clerks here in the service, and members of the Republican campaign committee boldly told the country they were going to cut off 40,000 Government clerks here in Washington absolutely idle and useless and incumbering the rolls and doing nothing.

Mr. MERRILL. I am not responsible for statements made in a political campaign.

Mr. TAYLOR. But if there is such a number of useless and idle employees here—

Mr. MERRILL. I would like to get hold of some of them. I understand there were also statements made in the campaign that by the dismissal of useless employees they could save a sum of money which was greater, by a hundred million dollars, than the entire pay roll of all the civil employees in the city of Washington.

Mr. SINNOTT. That was all denied in the Democratic platform.

The CHAIRMAN. Is there anything more?

Mr. MERRILL. We have an item in here for printing, etc. We have had to print letterheads and forms for advertising required under the act, voucher forms, etc. I do not know whether we can print anything more since we have submitted our estimates to the Appropriations Committee. It is certain that we can't print a sheet of paper after the 1st of July without this authorization, so that what we suggest in here is a general authorization with the details to be settled by the Committee on Appropriations.

Mr. WINSLOW. Suppose there were 13,000 surplus clerks on the rolls in Washington, how many would you want?

Mr. MERRILL. Seventy-five. I haven't any trouble in getting clerical assistance. What I want is experts.

Mr. WINSLOW. You can't make a hydraulic engineer out of a typewriter?

Mr. MERRILL. It hasn't been done so far.

Mr. SINNOTT. Assuming that you had all the assistance needed at this time, how long would it take you to grant a permit on the Deschute Reservation?

Mr. MERRILL. It depends on the order in which we take up the applications that are before us.

Mr. SINNOTT. Assuming you take up all of those before you get to the Deschute Reservation proposition how long would it take you to get to it?

Mr. MERRILL. If we had all the assistance we could properly use and we were not delayed by request for hearings, it should not take longer than two or three weeks to act upon licenses in the Washington office after the advertisements have been completed and the field reports submitted. We would not be justified in employing a personnel sufficient to have 100 or more field examinations made simultaneously. It would take at least a year and probably more to handle the applications now before the commission with the personnel for which we presented estimates for the fiscal year 1922. Under present conditions our efforts must primarily be directed toward completing the regulations and preparing forms for applications for permits and licenses. While we are having field examinations made as rapidly as it can be done, we must depend entirely upon such field personnel as the departments have available for assignment to this work over and above their own demands upon the same personnel.

We have, for example, sent out to the district engineer of the Forest Service in San Francisco 35 applications for examination and report. If he can complete them inside of a year he is doing well.

Mr. RAKER. Supplementing the remarks of the gentleman from Oregon, suppose there is an objection filed to the granting of a permit. In addition to the field survey your commission has ample power now under the law to set a time for hearing and hear all interested parties on the question of whether or not the permit should be granted and finally whether the license should be granted.

Mr. MERRILL. We are doing it right now.

Mr. RAKER. So there is no question about that?

Mr. MERRILL. There is no question. We advertise in a newspaper, the newspaper with the largest circulation in every county affected by the project. We notify by letter the governor of the State and the head of every State department that is interested in water-power development. We notify county authorities and the mayor of any municipality in reach of the project.

Mr. RAKER. Do you give those parties an opportunity to be heard within a reasonable distance of the project?

Mr. MERRILL. No, we have nobody other than in the city of Washington to hold the hearings.

Mr. RAKER. Have to bring them here to Washington? Doesn't that amount almost to a denial of justice?

Mr. MERRILL. Yes, sir; but it can't be helped now.

Mr. RAKER. There are a lot of people who would like to have a chance to be heard and are entitled to it. To come to Washington is a denial of justice to those people.

Mr. MERRILL. Yes; we have a request for a hearing in Kennowick, Wash. We can't grant it.

Mr. RAKER. What would be your suggestion about that?

Mr. MERRILL. If we get this provision here, our purpose is to organize our work in field divisions, using the existing personnel in the three departments and supplementing them by employees of the commission where necessary. In my opinion we should allow these field officers to do the advertising required by the act, to give the public notice, to examine the applications, and to hold the public hearing and to submit the evidence and their conclusions to the commission for review and action.

Mr. RAKER. Just one other question remains in line with that suggestion. You feel as though there is power enough in the commission to do that?

Mr. MERRILL. There is without doubt.

Mr. RAKER. There is power enough under the law for the commission to do that now?

Mr. MERRILL. Yes.

Mr. RAKER. But what you lack is——

Mr. MERRILL (interposing). Anybody to do it.

Mr. McFARLAND. What would be the situation providing the bill before this committee failed of passage and providing applications for power privileges in a national park should be filed? What would be the situation with respect to hearings on those applications?

Mr. MERRILL. You mean if this bill were to pass?

Mr. McFARLAND. Yes.

Mr. MERRILL. They would have to come to Washington to be heard, but they would be heard. If you or any representative of the public, or public agency, asked to be heard, you would have the privilege.

Mr. McFARLAND. How would you know?

Mr. MERRILL. We advertise that project.

Mr. McFARLAND. Where?

Mr. MERRILL. In the localities. We publish these notices also in the technical press and we supply them to the newspaper press.

Mr. McFARLAND. Then you see some of us who have been on this firing line for 25 years would have to take the local papers in the West where these places, all these national parks are, in order to have notice.

Mr. RAKER. Don't you keep a scout on the ground all the time?

Mr. McFARLAND. Sure.

Mr. MERRILL. Mr. McFarland is under a misapprehension. We keep a mailing list in the department to mail notices to anybody who requests it. If he files a request for notice he would get a notice.

Mr. SINNOTT. What disposition are you making of the pending applications for homestead entries on power sites?

Mr. MERRILL. Within power reserves?

Mr. SINNOTT. Yes, sir.

Mr. MERRILL. The commission is doing this, is making examinations to determine whether they should be opened to entry. When an application comes in for an entry in a power site reserve, we ask the Forest Service, Geological Survey, or General Land Office, whichever is better fitted to furnish the information, to examine the application and it makes its report. If the commission finds that the land can be opened to settlement without injury to the power site it is opened.

Mr. SINNOTT. There were some suspended entries covered by the act itself, weren't there?

Mr. MERRILL. That is handled by the Department of the Interior.

Mr. RAKER. One further question, saves the record and puts the matter in the record so it relieves the public. I have received a good many letters from individuals, from chambers of commerce, county organizations, State organizations, fish and game commissions, relative to placing certain dams in the Klamath River.

Mr. MERRILL. Yes.

Mr. RAKER. Before the commission agrees upon that they will make a thorough examination under their powers to see whether it is practicable, etc.?

Mr. MERRILL. Yes, sir.

Mr. RAKER. And these parties and all will be given an opportunity to be heard before the commission, to present their case?

Mr. MERRILL. Yes. We have notified the Fish and Game Commission of California of the fact that these applications were filed, and if they wanted a hearing they can have a hearing.

Mr. RAKER. In addition to that, when these three departments transfer that power over to the Water Power Commission you will be able, if it becomes necessary, to take the testimony if the testimony is desired near the location.

Mr. MERRILL. I hope we will be able to put into the field everything that is possible to do in the field. There is the place where it should be done.

Mr. RAKER. One other question, and then I am through. The same way with the irrigation system, you will take up the question of whether or not in granting the permit to one of the water power companies for hydroelectric development that you will not allow the water to be used in such a way that it can not be used for irrigation, if by proper turning it from the wheel it can be utilized as it goes through the dam for irrigation purposes?

Mr. MERRILL. We will not do that if we have somebody to send out there and make an examination. I say, if we have anybody to do it we will do it. We are faced with either one of three alternatives. We must have additional personnel to operate this act, or we must ignore the provisions of the act in order to issue licenses, or we must stop development.

Mr. RAKER. There are people on both sides, contesting parties, those in the lower part of our State and those in the upper part, particularly in the lower part, figuring on going in there to develop, particularly in the San Joaquin Valley. When that comes up for development those parties will be given full, free opportunity to present the facts in regard to it?

Mr. MERRILL. We advertise it.

Mr. SINNOTT. Do you go into the matter of water rights?

Mr. MERRILL. Yes, sir. A man has to establish his water rights, and we refer that back to the authority which is in charge.

Mr. SINNOTT. But you don't claim to have jurisdiction over water rights?

Mr. MERRILL. No, sir.

Mr. SINNOTT. And if there is a controversy between the relative merits and desirability of irrigation water for power purposes, you don't adjudicate that?

Mr. MERRILL. We will probably take that up, as we will a lot of other matters, with the State authorities for that purpose.

Mr. RAKER. That is so vital, I wish you would, in making your answer, just look to the provisions of the bill.

Mr. MERRILL. I know what the provision of the bill is, Judge, that all matters shall be taken into consideration, including water power, navigation, and other beneficial public uses, which includes irrigation, domestic water supplies, and every other use.

The CHAIRMAN. Can you estimate the cost that would result if 15126 becomes a law?

Mr. MERRILL. I would put in for that, Mr. Chairman, the estimate we presented to the Appropriations Committee.

The CHAIRMAN. Very well. I think it would be advantageous to have access to those estimates.

Mr. MERRILL. And may I add one thing more. We have, as I have said, no authority at the present time to purchase law books, books of reference, or periodicals. I have personally turned over to the commission my own library, consisting of two or three thousand dollars' worth of books. I am personally purchasing technical magazines necessary for the work.

The CHAIRMAN. Don't the appropriation for the next fiscal year take care of that?

Mr. MERRILL. For the next fiscal year they have covered that. What I would like for you to do is to put in following the figures

"\$100,000", in line 21, these words "of which amount not exceeding \$—— may be expended for necessary printing and binding, and not exceeding \$—— for law books, books of reference, periodicals, and directories." I mean make an amendment that will authorize the use of part of that \$100,000 for the balance of the fiscal year. We can not do it as it now stands.

The CHAIRMAN. Will you submit that amendment?

Mr. MERRILL. I will submit it.

I would like also to submit certain exhibits I have here.

The CHAIRMAN. You have that privilege.

(The data submitted by Mr. Merrill is as follows:)

DUTIES AND FUNCTIONS OF THE COMMISSION.

The commission has general administrative control over all power sites on the navigable waters and on the public lands and reservations of the United States, and over the location, design, construction, maintenance, and operation of power projects upon such sites. It has the power and duty, under certain conditions, of regulating the financial operations, fixing the rates and determining the character of service and of making physical valuations of the properties of licensees who utilize such sites. It is authorized to make general investigations of broad scope and is required to make certain special investigations and report thereon to Congress. It is further authorized to cooperate with State and National Governments in its investigations, and to publish the results of its work in special and annual reports.

The various duties and functions of the commission are segregated into groups, and the means by which they may be performed are discussed, in the following pages. References are to section, page, and line, of the pamphlet print of the act.

1. *General administration of water powers.*—In the general administration of water powers the act places the following duties upon the commission:

(a) To give notice to "any State or municipality likely to be interested" of the filing of any application for a license, and to publish notice of such application for eight weeks. (Sec. 4d, p. 11, line 7; sec. 4e, p. 11, line 15.)¹

(b) To file with local land offices notice of any application for a license together with a description of the lands of the United States affected thereby. (Sec. 24, p. 46, line 14.)

(c) To investigate all projects proposed to be constructed on any stream over which Congress has jurisdiction, but which is not defined as "navigable waters," whenever declaration of intention to construct such project is filed with the commission. (Sec. 23, p. 45, line 2.)

(d) To hold hearings when desirable or necessary in connection with any application for a permit or license. (Sec. 4g, p. 12, line 24.)

(e) To issue preliminary permits for power projects. (Sec. 4e, p. 11, line 12.)

(f) To issue license for power projects and transmission lines on navigable waters, public lands, and reservations of the United States. (Sec. 4d, p. 9, line 11.)

(g) To investigate and approve all voluntary transfers of licenses. (Sec. 8, p. 18, line 17.)

(h) To investigate and approve all contracts for power made by a licensee which will extend beyond the termination of the license. (Sec. 22, p. 43, line 2.)

(i) To provide for the proportionate distribution of annual costs of headwater improvements between owner and licensees benefited thereby. (See 10f, p. 25, line 4.)

(j) To assess against all licensees benefited the annual cost of any headwater improvement constructed by the United States. (See 10f, p. 25, line 8.)

(k) To prescribe rules for and to fix annual license charges, and to determine the relation of such charges to prices to consumers. (See 10e, p. 23, line 6.)

To put the above provisions into effect the commission is authorized:

(l) To make rules and regulations for administration of the act. (See 46, p. 13, line 24.)

and is required:

(m) To submit annually to Congress on or before the first Monday in December a classified report showing permits and licenses issued, the parties thereto, the terms thereof and the moneys received. (See 4c, p. 9, line 5.)

¹ References are to section, page, and line, respectively, of the pamphlet print of the act.

Of the 13 items above listed, five, namely, (b), (e), (f), (k), and (l), have up to the present been performed by the Departments of Agriculture and Interior in connection with their administration of water powers upon public lands and reservations. Authorization for power developments upon navigable rivers has heretofore been granted only by specific act of Congress; and since none has been so granted in recent years, none of the items listed has been performed by the War Department. The eight remaining items comprise administrative duties in addition to anything required by previously existing law or hitherto performed by any one of three departments. Of these eight items, (a) notification and publication of applications and (c) field investigations can be performed through the field personnel and field offices of the individual departments. Items (g), (h), (i), and (j) will require action by the commission. Hence, of the 13 items above listed all but the first three must be performed by the commission itself if duplication of work is to be avoided and if the provisions of the act are to be effectively carried out.

2. *Design, construction, and operation of project works.*—The commission has authority to pass upon the general scheme of development of power sites, upon the plans and specifications of the works, and upon certain features of maintenance and operation of project works; and it is its duty:

(a) To require that "the project adopted * * * shall be such as in the judgment of the commission will be best adapted to a comprehensive scheme of improvement and utilization," and that plans be modified when necessary to secure such scheme. (See 10a, p. 20, line 10.)

(b) To approve maps, plans and specifications of project works. (Sec. 9, p. 19, line 19.)

(c) To pass upon and approve prior to construction any substantial alteration in project plans. (Sec. 10b, p. 20, line 19.)

(d) To require that project works be properly maintained and kept in efficient operating conditions. (Sec. 10c, p. 21, line 3.)

(e) To prescribe the time within which projects shall be begun and completed. (Sec. 13, p. 29, line 11.)

(f) To keep in touch with conditions of the power market tributary to every development in order to require extensions as rapidly as conditions warrant. (Sec. 13, p. 29, line 17.)

(g) To prescribe rules and regulations for the protection of life, health, and property in connection with the construction or operation of project works by licensees. (Sec. 10c, p. 21, line 10.)

Of the seven items under the above heading one only, item (e), has hitherto been performed by any of the three departments to the degree contemplated by the act. Six of the seven items, therefore, involve essentially new duties of which all but item (d), and possibly to some extent item (e), will require action by the commission itself. Item (d) could be handled by the field forces of the several departments after general regulations concerning this item have been prepared by the commission. The same would be true, within limits, of item (c).

The most important item under this heading is (a), the preparation of a comprehensive plan of development in connection with each power project, one which, as required by the act, shall take into account full utilization of the stream for "purposes of navigation, water-power development, and of other beneficial public uses." The investigations necessary for the preparation of such plan could not be made by the three departments without substantial increase in their present force. The commission can not do it without adequate personnel of its own; hence until provision is made for such personnel the commission must either suspend action indefinitely upon the greater part of the applications before it or ignore the plain requirements of the law.

It will also be necessary to make a detailed examination of the maps and plans submitted. This will require the service of experts in construction and in mechanical and electrical engineering. The design proposed may effect in material degree the cost of the project. The same is true of the methods of construction. Unless, therefore, wholly uncontrolled prospective liabilities are to be set up against the United States on account of these projects, it will be necessary not only to give the most complete review of the project plans but also to inspect the work while under construction.

3. *Regulation of financial operations.*—Under the provisions of the act the commission has authority and it is its duty:

(a) To prescribe a system of accounting for licenses. (See 4f, p. 11, line 24.)

(b) To require the submission of financial statements and reports. (See 4f, p. 12, line 2.)

(c) To prescribe rules for the establishment and maintenance of depreciation reserves by licensees. (See 10c, p. 21, line 7.)

(d) To devise principles for the proper apportionment of surplus earnings to amortization reserves. (See 10b, p. 21, line 19.)

(e) To regulate, under certain conditions, the amount and character of securities which may be issued for the financing of power projects; (See 19, f. 29, line 14; See 20, p. 40, line 19), and to hold hearings in connection therewith. (See 4g, p. 13, line 1.)

All of the items under the above heading are new legislation, involve a performance of duties not hitherto undertaken by any of the three departments, and require action by the commission itself.

Item (a) the formulation of a system of accounting, is a duty that can be performed only by technical experts. It will require detailed study of such accounting systems of the several States as have been provided by statute or by action of public-service commissions, before any accounting system to be made generally applicable can properly be devised. The accounting system and its administration are fundamental in the operation of the act. Every dollar charged to the investment account of the licensee is a potential liability of the United States; for the United States may take over the properties at the license termination and if it does so, the price is determined by the amount which the commission has permitted to be entered upon the books of the licensee. This amount can be controlled only by requiring periodical reports and by making necessary inspection and audit. The accounting system can not be prepared or administered by the individual departments, but it involves work of a character which must be done by the commission itself, if done at all.

Item (e) the regulation of the issuance of securities, will be undertaken only in those cases where the State concerned has provided no agency with authority to act. If and when the commission does act, special technical investigations will be required and hearings must be held. This can not be done by the individual departments, first, because they would have no authority and second, because they have not the qualified personnel. Until, therefore, authority is given to employ the necessary experts, reporters, etc., this provision of the act must remain inoperative.

4. *Regulation of rates and service.*—Jurisdiction over the regulation of rates and service is conferred upon the commission:

(a) In intrastate business whenever the State has not provided an agency with power of regulation. (Sec. 19, p. 39, line 14.)

(b) In interstate business whenever the States concerned have not the power to act individually or can not reach mutual agreement. (Sec. 20, p. 40, line 19.)

The above items contemplate entirely new activities never heretofore exercised by the Federal Government. However, as in the case of Item 4 (e) the commission will be required to act only when the States concerned are unable to exercise the proposed powers themselves.

5. *Valuation of Properties of Licenses.*—It is a fundamental principle of the act that valuations for the purpose of rate making, or of purchase at the termination of the license period, shall be based upon the net investment in the property and that this amount shall be determined currently either through the system of accounting or through physical valuation. For this purpose it is the duty of the commission:

(a) To require the filing of statements showing the cost of construction of project works and the price paid for water rights, rights of way, lands, and interests in lands. (Sec. 4a, p. 8, line —.)

(b) To make valuation of all projects brought under license which have been constructed in whole or in part prior to application for license. (Sec. 23, p. 44, line 6.)

(c) To make valuation in case of condemnation of the properties of a licensee by the United States. (Sec. 14, p. 32, line 8.)

(d) To determine the net investment and severance damages in the event that properties of a licensee are taken over by the United States at the termination of a license period. (Sec. 14, p. 31, line 17.)

All of the above items are new legislation and all will require the personal attention and action of the commission or its staff.

The valuation of public utility properties is a highly technical procedure from the standpoint of the legal, accounting, financial, and engineering problems involved. None of the three departments have ever undertaken work of this character or have a personnel with training or experience along this line.

The act requires (sec. 25, p. 45, line 23) "that when application is made for license * * * for a project or projects already constructed, the fair value of such project or projects" shall be determined, and that such fair value shall thereupon be taken as the "net investment" of the license as of the date of determination. There are scores of large operating projects with aggregate values of hundreds of millions of dollars for which application for license will soon be filed. The valuation of these projects will require a considerable force and will be a matter of several years work even if started

at once. The three departments could not do this work and perform their other functions even if they contained a personnel qualified to conduct proceedings of this nature. Unless and until the commission has authority to employ a personnel for this work it must remain undone and licenses must be denied to all such applicants, although they are entitled under the act to receive them.

6. *General investigations.*—In addition to its duties of general administration and regulation of water-power developments the commission is authorized, or the performance of certain of its duties will require it, to undertake general investigations and to collect and record data concerning:

(a) The utilization of the water resources of any region to be developed. (Sec. 4a, p. 7, line 16.)

(b) The water-power industry and its relation to other industries and to interstate or foreign commerce. (Sec. 4a, p. 7, line 17.)

(c) The location, capacity, development costs, and relation to market of power sites. (Sec. 4a, p. 7, line 19.)

(d) Whether the power from Government dams can be advantageously used by the United States for its public purposes and what is the fair value of such power. (Sec. 4a, p. 7, line 21.)

(e) Lands of the United States reserved as power sites to determine whether they may be opened to entry subject to a reservation of the power rights of the United States. (Sec. 24, p. 46, line 19.)

(f) Deterioration of structures and equipment for the purpose of establishing rates of depreciation and amount of annual depreciation reserves. (Sec. 10c, p. 21, line 7.)

In connection with such investigation the commission is authorized:

(g) To hold hearings and to require the attendance of witnesses and the production of evidence. (Sec. 4g, p. 13, line 2.)

(h) To make public from time to time the information secured and to provide for the publication of its reports and investigations. (Sec. 4c, p. 9, line 1.)

(i) To cooperate with State and National Governments in its general power investigations. (Sec. 4b, p. 8, line 16.)

Of the nine items under the above heading only one, item (e), has hitherto been undertaken by either of the three departments to the extent contemplated by the act, and even investigations covered by item (e) have been conducted only occasionally.

For the investigations comprised under items (a), (b), (c), and (d), authority is given in section 4 (b) to request temporary detail of experts or other officers from the various Executive Departments and agencies of the Government. It is manifest, however, that investigations can be conducted by this means only if the several departments and agencies have a personnel qualified to do the work and to the extent that such personnel can be detached from their other duties for this purpose. At the best this procedure would involve a constantly shifting personnel—an unsatisfactory, uneconomic and inefficient method of doing business. These investigations can never be properly conducted until the commission has a force itself or there are in one or more of the three departments a force permanently assigned to the work who can be either detailed to the commission or retained in the department under the supervision of the commission.

The adequate determination of depreciation and the establishment of depreciation reserves is a far more important matter in connection with the Federal control of water powers under the act than in connection with similar control under State legislation. While State and Federal control will deal equally with these matters as regards adequate maintenance and operating efficiency of power projects, only the Federal Government is concerned in the relation of depreciation reserves to the purchase price of the property, for under the act all such accumulated reserves are to be deducted from original cost of the properties are taken over at the license termination. It is of great importance, therefore, that the question of depreciation, or deterioration, of structures and equipment be thoroughly investigated and that a thoroughly considered scheme of establishing and maintaining reserves be adopted.

The extent to which the commission can cooperate with the State or National Governments as contemplated by item (i) will depend entirely upon the means at its disposal for such purpose.

7. *Special investigations.*—In addition to the general investigations which the commission is authorized to undertake it is required to make special investigation and to submit to Congress:

(a) Reports in all cases where it finds that a Government dam may advantageously be used by the United States for public purposes in addition to navigation. (Sec. 4d, p. 10, line 25.)

(b) The results of its examination and surveys, together with plans and cost estimates, in connection with any project which it believes should be undertaken by the United States. (Sec. 7, p. 16, line 3.)

(c) Reports with cost estimates on all projects on navigable streams in which it appears that the construction of suitable navigation structures can not be undertaken by the applicant. (Sec. 12, p. 29, line 4.)

(d) On or before January 1, 1921, a report on "the cost and, in detail, the economic value" of the Great Falls power project, and "plans and estimates of cost necessary to secure an increased and adequate water supply for the District of Columbia." (Sec. 7, p. 18, line 3.)

(e) The commission would also be required to make special investigations and assist in the conduct of legal proceedings brought for cancellation of licenses or for requiring specific performance of the provisions of a licensee or of the act. (Sec. 25, p. 48, line 14.)

The five items listed above are essentially new legislation, involving duties which either are not at present performed by any of the three departments, or which are in addition to similar duties now performed. The War Department, through the Board of Engineers for Rivers and Harbors, makes reports to Congress on river improvements. These improvements occasionally provide opportunities for power developments which are reported upon by the engineers who make the examination, but the board probably seldom, if ever, has made reports of the nature required under items (a) and (b) and only occasionally under item (c). Several reports have hitherto been made on the matters involved in item (d). The act, however, calls for new information in addition to a review of previous reports.

In any case that may arise requiring legal proceedings looking toward cancellation of a license or enforcement of its provisions, it would be the duty of the commission to make the engineering and other technical investigations necessary and to act as adviser to the Attorney General. While the conduct of investigations and the preparation of reports could be handled by the individual departments, such matters would also involve a considerable amount of work on the part of members of the commission or of their staff.

Of the 45 special functions or duties required of the commission under the act and as listed in the preceding pages, only six items, namely, 1 (b), (e), (f), (k), and (l), and 2 (e) are now being performed by the three departments. Nine items, namely, 2 (a), (b), and (c); 6 (a), (b), and (c); and 7 (a) and (c) involve duties similar in kind, but additional in amount, to duties now being performed by the three departments. The remaining 30 items are entirely new duties not hitherto performed by any of the executive departments.

MEMORANDUM OF ORGANIZATION APPROVED BY COMMISSION AT ITS MEETING OF JULY 28, 1920.

Before the Federal Power Commission can undertake the duties placed upon it by the Federal water power act it will be necessary for it to establish a staff organization through which it can not only direct the work performed by its own employees, or those assigned to it by the three departments, but also correlate the work performed for it under the provisions of the act by the departments themselves. Effective administration of the act requires a form of organization which will fix definitely both authority and responsibility.

The work of the commission may be divided into the following activities: Engineering, accounting, statistical, regulatory, licensing, legal, operation.

These several divisions are considered in detail below.

Engineering.—This is the most important division of the work of the commission, involving the following duties either authorized or required by the act:

General investigation of electric-power industry.

General investigation of water-power sites, and estimates of cost of development.

Estimates of amount and value of power available at Government dams.

Examinations, cost estimates, and reports to Congress on projects recommended for construction by the United States.

Examinations, cost estimates, and reports to Congress on projects for which it is recommended that the cost of navigation facilities be supplied in whole at in part by the United States.

Preparation of comprehensive plans for development for all purposes of streams and stream systems upon which applications for licenses are made.

Passing upon construction plans proposed by licensees.

Physical valuation of properties in rate making proceedings and when existing plants are brought under the provisions of the bill.

Determination of necessary repairs required for maintaining projects in effective operating condition.

Determination of adequate depreciation reserves upon properties.

Determination of operating rules necessary for protection of life, health, and property.

The act provides for the detail of an officer from the United States Engineer Corps to serve the commission as engineer officer. The organization of this division of the work should be undertaken at an early date, since action will be necessary on the many applications which have already been filed.

Accounting and statistical.—For the present at least these two divisions should be combined. The most important item of work will be the formulation of a system of accounting. This will involve a critical review of the accounting systems of the several States and the adaptation of the commission's system as far as practicable to those of the States. The head of this division must be a man who has had a thorough training in the theory and practice of public utility accounting. It is work that calls for technical qualifications of a high order. It is not probable that the three departments have anyone with the training or experience which would qualify him to perform this work. It will be necessary, therefore, either to secure the temporary detail of some qualified person from the Interstate Commerce Commission under the provisions of section 4 (b) of the act, or to employ someone from outside the Government service. The accounting system and its operation is a fundamental feature of the act and will be involved in the issuance of every license, the operation of every project, and in the action taken toward regulation of rates and securities. This division should, therefore, be organized at the earliest practicable date.

The general statistical work will be a matter of development. Information concerning water-power resources, utilization and distribution are very meager and unreliable. The commission should endeavor to develop this branch of its activities in cooperation with the industry, with the State public utility commissions, and with other Government agencies.

Regulatory.—This division covers mainly rate, service, and securities regulation. Since none of these matters are likely to be brought up immediately, the organization of this division may be omitted for the present.

Licensing and legal.—This division will be concerned with all legal matters affecting the work of the commission, and should have charge of the preparation of all permits and licenses and of their extension, transfer, termination, and revocation. Many important legal questions will arise when the commission starts operations. Among these will be: Interpretation of the act; of the relations between the authority of the commission and that of the several States, and of the bearing of State laws, such as those covering water rights, water-power franchises, and certificates of public convenience and necessity; upon the scope of the authority of the commission; assistance in the conduct of judicial proceedings in connection with revocations, and particularly in connection with valuation of properties; and decisions on international questions such as those involved in the settlement of the Niagara situation and in the issuance of licenses for developments on the St. Lawrence and other boundary streams. For these purposes knowledge of an experience in public land law, the law of waters, public utility statutes, and Government practice and procedure, is highly desirable.

A correct handling of the various legal problems as they first arise will be of great importance in establishing the work of the commission on a sound basis. The commission therefore should either have its own chief counsel or secure the assignment of an Assistant Attorney General in that capacity.

Operation.—This division covers the details of office operations such as care of quarters; procurement of equipment, letterheads, seal, and general supplies; establishment and maintenance of files, records, and library; preparation of annual reports; handling of details of advertisement of applications, and of appointment, transfer, etc., of personnel; and general control over the messenger, clerical, and stenographic force.

The act requires that before granting any application, public notice shall be given in writing to any State or municipality likely to be interested, and also that notice shall be published "for eight weeks in a daily or weekly newspaper published in the county or counties" in which the project is situated. It is important, therefore, that a procedure be arranged for giving and publishing such notices at an early date so that the commission may be in a position to give prompt consideration to the applications already before it as well as to those which may be filed hereafter. This division should accordingly be organized immediately with a chief clerk in charge.

On account of the fact that the commission will perform a part of its functions through the personnel of the three departments, it is important that the chief clerk

be thoroughly familiar with departmental procedure and practice and have had several years' experience in work of the character which he would perform for the commission.

Field offices.—Certain of the activities of the commission can be handled through the field forces of the three departments. It would be desirable that certain offices be designated to receive applications, give the public notice, make the advertisements required by the act, and handle the notifications to the General Land Office. Certain of the field officers should also be designated as field representatives of the commission in securing information and in making examinations and reports upon applications.

Recommendations.—It is recommended that the initial organization of the commission be in four divisions, under the general direction of the executive secretary, viz, engineering, accounting, legal, and operation, under the immediate charge, respectively, of a chief engineer, chief accountant, chief counsel, and chief clerk, with a distribution of duties as indicated on the attached chart; that immediate steps be taken to secure the assignment of a chief clerk and a chief counsel; that the attached orders defining the duties of the executive secretary and engineer officer be approved; and that the plan of utilizing field offices of the Corps of Engineers, the Geological Survey, and the Forest Service to represent the commission in certain matters, be approved in principle, leaving the details of the application of the plan to be worked out later.

Orders, No. 1:

By authority of section 2 of the Federal water power act approved June 10, 1920 (public 280), it is ordered that the executive secretary of the Federal Power Commission shall be authorized to draw upon the Secretary of the Treasury all warrants for expenditures out of appropriations heretofore or hereafter made for the use of said Commission.

Done at Washington, D. C., this 31st day of July, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

DUTIES OF EXECUTIVE SECRETARY.

By authority of section 2 of the Federal water power act, approved June 10, 1920 (Public, 280), it is ordered that the duties of the executive secretary of the Federal Power Commission, to be performed under the general direction of the commission, shall be as follows:

1. To administer the act as executive officer of the commission and to see that the rules and regulations of the commission are carried out.

2. To supervise under the act and regulations all personnel that may be employed by or detailed or assigned to the commission, and to prescribe their duties within the limits of the act and regulations.

3. To have general administrative charge of the conduct, preparation, and publication of all investigations, valuations, hearings, and reports authorized or required by the act, unless otherwise provided by the commission.

4. To approve vouchers for expenditures incurred on account of salaries or expenses payable under the provisions of the act.

5. To administer oaths and affirmations, examine witnesses, and receive evidences.

6. To formulate, authenticate, and record the findings of the commission provided for in section 4 (d), 7, 21, and 23 of the act, or other sections of the act, unless otherwise provided by the commission.

7. To attest all orders, decisions, or regulations of the commission, and to certify under seal copies of such orders, decisions, or regulations, or of any finding, report, map, plan, or other record of the commission, whenever required for any lawful purpose.

8. To execute and issue permits and licenses under the seal of the commission.

9. To approve under the seal of the commission voluntary transfers of licenses, or of the rights thereunder granted.

10. To cancel or terminate permits or licenses under the conditions prescribed in section 5 and in section 13 of the act, respectively.

Done at the city of Washington, District of Columbia, this 23d day of August, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

DUTIES OF ENGINEER OFFICER.

By authority of section 2 of the Federal water power act, approved June 10, 1920 (Public, 280), it is ordered that the duties of the engineer officer of the Federal Power Commission, to be performed under the general direction of the executive secretary, shall be to act as chief engineer of the commission and to have general charge of its engineering activities.

Done at the city of Washington, District of Columbia, this 23d day of August, 1920.

NEWTON D. BAKER, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

By authority of section 2 of the Federal water power act, approved June 10, 1920 (Public, 280, 66th Cong.), and pursuant to the action of the Federal Power Commission at its meeting of September 3, 1920, it is hereby ordered that the duties of the executive secretary of the commission shall include, in addition to those prescribed in Orders No. 2, dated August 23, 1920, the following, namely: To authorize all advertising in newspapers required by section 4 (d) and section 4 (e) of the act, and such other advertising as may be required in the administration of the act.

Done at the city of Washington, District of Columbia, this 3d day of September, 1920.

NEWTON D. BAKER, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1922.

FEDERAL POWER COMMISSION.

Salaries:

Executive secretary (act June 10, 1920, vol. 41, p. 1063, secs. 1-30; submitted)	\$5,000
Chief valuation engineer, \$7,500; civil engineers—one \$6,000, one \$3,300, one \$2,400, two at \$2,100 each; two hydraulic engineers, at \$3,300 each; electrical engineer, \$2,400; mechanical engineer, \$2,400; draftsmen—one \$2,000, two at \$1,500 each; chief accountant, \$7,500; accountants—two at \$3,300 each; assistant attorneys—two at \$3,600 each; chief clerk, \$3,500; librarian, \$2,700; clerks—one \$2,000, three of class four (submitted)	74,700

General expenses:

For every expenditure requisite for and incident to the authorized work of the Federal Power Commission, including personal services in the District of Columbia and the field, and including not to exceed \$2,000 for necessary books, reports, periodicals, and directories (submitted) .. 297,365

Employees.	Rate per annum.	Estimated, 1922.
		<i>Number.</i>
Valuation engineer	\$4,500	1
Mechanical engineer	3,300	1
Do.	2,400	1
Electrical engineer	3,300	1
Do.	2,400	1
Civil engineers	3,300	5
Do.	2,400	6
Do.	2,100	6
Civil engineers, junior	1,800	17
Hydraulic engineers	2,400	2
Engineering aids	1,500	12
Draftsmen	1,500	8
Accountant	4,500	1
Do.	3,300	1
Accountants	2,400	2
Do.	1,800	3
Assistant attorney	4,500	1
Assistant attorneys	2,400	4

100 PROPOSED AMENDMENTS TO THE FEDERAL WATER-POWER ACT.

Employees.	Rate per annum.	Estimated, 1922.
		<i>Number.</i>
Clerks.....	\$1,800	4
Do.....	1,600	9
Do.....	1,400	23
Messengers.....	810	2
Do.....	720	2
	213,820	113
One-fourth deducted because of estimated average nine months' service during fiscal year.....	53,455	
Salaries.....		\$160,365
OTHER OBJECTS OF EXPENDITURE.		
Expense of making field investigations, including travel and subsistence, and the outfitting and maintenance of field parties.....		116,000
Books, periodicals, reports, and directories.....		2,000
Advertising, pursuant to the requirements of section 4 (e) of the Federal water power act.....		10,000
Furniture and equipment.....		5,000
Stationery.....		1,200
Telephone and telegraph.....		1,100
Miscellaneous.....		1,700
Total.....		297,365

Investigations by other departments:

For reimbursing other executive departments and agencies of the Government for expenses of investigations requested by the commission (act June 10, 1920, vol. 41, pp. 1063, 1065, secs. 2, 4-b; submitted).... \$100,000

Printing and binding:

For printing and binding for the Federal Power Commission (submitted). 5,000

Total..... 482,065
 Amount appropriated for the fiscal year ending June 30, 1921..... 100,000

List of applications before the Federal Power Commission.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920. 1. June 10 2. June 10	Dixie Power Co..... C. W. Spoerry.....	Title Guaranty Building, St. Louis, Mo. Bonners Ferry, Idaho.....	License..... Preliminary permit.....	Dam and power house, White River, Ark. Power plant, Morje River, Pend d'Oreille National Forest, Idaho.	Mining, transportation etc. Furnishing power and light to Bonners Ferry, and manufacture of chemicals.
3. June 11	Washington Irrigation & Development Co.	Care of Electric Bond & Share Co., 71 Broadway, New York, N. Y.	.....do.....	Reservoir and power house.....	Electricification of railroads, supplying energy to individual plants, for operation of pumping plants to supply water to the arid lands of the region, and for public-utility purposes. Not stated.
4. June 12	Speed River project.....	418 Foxcroft Building, San Francisco, Calif.	.....do.....	Reservoirs, conduits, power houses, and transportation lines, Speed River, Tease Lake, Crater Lake, Long Lake, Tongass National Forest, Alaska.	Railways, electrochemical and metallurgical industries; municipal, commercial, general utility, and other purposes. Not stated.
5. June 18	Rocky Mountain Power Co..	Care of Sullivan & Cromwell, 49 Wall Street, New York, N. Y.	.....do.....	Power project, Flathead Lake and Flathead River, Mont.	Public utility.
6. June 19	Niagara County Irrigation & Supply Co.	Care Thurman, Bulkley & Quigley (attorneys for applicant), 501 Union Trust Building, Washington, D. C.	Preliminary permit.....	Conduits, power houses, transmission lines, etc., Niagara River, N. Y.	Public service and private industries. Not stated.
7. June 19	Roanoke River Development Co.	Care of H. G. Buchanan, president, 318 Mutual Building, Richmond, Va.	.....do.....	Reservoirs, conduits, power houses, transmission lines, etc., Roanoke River, Va.	Public utility.
8. June 19	St. Lawrence Transmission Co.	Potsdam, N. Y.	.....do.....	Power project, St. Lawrence River, N. Y.	Public service and private industries. Not stated.
9. June 21	Pitt River Power Co.....	Care of Harr & Bates, Westory Building, Fourteenth and F Streets, Washington, D. C.	.....do.....	Reservoirs, conduits, power houses, and transmission lines, Pitt River, Calif.	Public utility.
10. June 21	Sound Power Co.....	25 Broad Street, New York City.....	.....do.....	Reservoirs, conduits, and power house, Sulttan River and Olney Creek, Wash.	Manufacture of pulp and paper.
11. June 21	Straits Power Co.....	Room 1517, 25 Broad Street, New York City.	.....do.....	Reservoir, conduit, and power house, Solduc River and Crescent Lake, Wash.	Manufacture of pulp and paper.
12. June 23	Big Horn Canyon Power & Irrigation Co.	Hardin, Mont.....	.....do.....	Big Horn River, Mont.....	Not stated.
13. June 24	Ford Motor Co.....	Dearborn, Mich.....	License.....	Power plant at Government dam at Green Island, Hudson River, N. Y.	Manufacturing.
14. June 25	Western New York Utilities Co. (Inc.).	Medina, N. Y.....	Preliminary permit.....	Division of additional 500 second-feet for power development, Erie Canal, N. Y.	Public utility.

List of applications before the Federal Power Commission—Continued.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920.					
15. June 30	Hydraulic Race Co.....	Lockport, N. Y.....	License.....	Diversion of 1,000 second-feet of water, Niagara River, N. Y.	Public utility.
16. July 3	The Niagara Falls Power Co..	Niagara Falls, N. Y.....	.....do.....	Diversion of all water permitted under treaty of May 13, 1910, Niagara River, N. Y.	Not stated.
17. July 6	Western Tie & Timber Co.....	905 Syndicate Trust Co., St. Louis, Mo.	Preliminary permit.....	Series of power plants and transmission lines, Current River, Mo.	Do.
18. July 7	Idaho Power Co.....	Care Marshall O. Leighton, McLachlen Building, Washington, D. C.	.....do.....	Reservoir, conduit and power house, Snake River (Twin Falls), Idaho.	Public Utility.
19. July 7	Idaho Power Co.....	Care Marshall O. Leighton, McLachlen Building, Washington, D. C.	Preliminary permit.....	Reservoir, conduits, and power houses, Snake River (Upper Salmon Falls), Idaho.	Do.
20. July 7	Utah Power & Light Co.....	.....do.....	.....do.....	Soda Point, Lava, Narrows, and Mink power projects, Bear River, Idaho.	Do.
21. July 8	W. R. Banks.....	Lock box 1005, Lamar, Mo.....	License.....	Dams and conduits, Osage and Niangua Rivers, Mo.	Not stated.
22. July 8	Paul T. Brady.....	165 Broadway, New York City.....	Preliminary permit.....	Dams and power houses, Delaware River, (Butler's Rift, Bushkill, Belvidere, Barryville, Shohola), N. Y., Pa., and N. J.	Public utility.
23. July 8	Louisville Power Corporation.	Care Hugh L. Cooper, 101 Park Avenue, New York City.	.....do.....	Dams, conduits, power houses, transmission lines, etc., St. Lawrence River, N. Y.	Not stated.
24. July 8	Lower Niagara River Power & Water Supply Co.	.....do.....	.....do.....	Conduits, power houses, transmission lines, etc., Niagara River, N. Y.	Do.
25. July 8	Niagara, Lockport & Ontario Power Co.	Marine Trust Co. Building, Buffalo, N. Y.	.....do.....	.....do.....	Do.
26. July 9	City of Buffalo.....	Buffalo, N. Y.....	.....do.....	Hydroelectric plant, Niagara River, N. Y.	Municipal.
27. July 9	Courtland Prentice Chenaunt.	Tulsa, Okla.....	.....do.....	Power projects, Arkansas River, Okla.....	Public utility.
28. July 12	J. D. Markham, A. Kelsey, and J. F. Drnar.	512-514 Globe Building, St. Paul, Minn.	License.....	Dam and power house, St. Croix River, Minn.	Not stated.
29. July 19	St. Cloud Electric Power Co..	Care St. Cloud Water Power Co., St. Cloud, Minn.	Preliminary permit.....	Dam, lock, conduits, etc., Mississippi River, Minn.	Public utility.
30. July 22	Beckman & Linden Engineering Corporation.	Atlas Building, 604 Mission Street, San Francisco, Calif.	.....do.....	Reservoir and power house, Colorado River, Ariz. and Calif.	Not stated.
31. July 23	Canada Syndicate (Ltd.) and Duncan Young & Co. (Inc.).	Duncan, Young & Co. (Inc.), 111 Broadway, New York City.	.....do.....	Power, navigation, and storage projects, Delaware River, N. J., Pa., and N. Y.	Do.
32. July 23	R. W. Hawley.....	Room 912, Commercial Building, 833 Market Street, San Francisco, Calif.	Preliminary permit.....	Reservoirs, conduits, power houses, and transmission lines, Silver Creek, Calif.	Do.
33. July 24	C. A. Heberlein.....	Box 858, Prescott, Ariz.....	.....do.....	Power project, Cataract Creek, Grand Canyon National Park, Ariz.	Do.

34. July 24	Montana Water Power & Electric Co.	702 Spalding Building, Portland, Oreg.	.....do.....	Power project, South Fork of Flathead or Pend d'Oreille River at the outlet of Flathead Lake, Mont.	Do.
35. July 27	Northwestern Power & Manufacturing Co.	Care Donworth, Todd & Higgins, Hoge Building, Seattle, Wash.	.....do.....	Reservoir, conduit, and power house, Lake Crescent and Lyre River, Wash.	Public utility.
36. July 27	Alex. Polson, M. E. Reed, and W. H. Abel.	Care W. H. Abel, Montezano, Wash.	.....do.....	Power project, Wynoochee River, Wash.	To develop a copper mine.
37. July 28	J. Kennard Thomson and Peter A. Porter.	Care Dewitt Clinton, Buffalo Savings Bank Building, Buffalo, N. Y.	.....do.....	Reservoir and power house, Niagara River, N. Y.	Not stated.
38. July 29	Crown-Willamette Paper Co.	Pittcock Block, Portland, Oreg.	License.....	Modification of dam and power house, Willamette River, Oreg.	Manufacture of wood pulp.
39. July 30	Millard F. Bowen.....	117 Tennessee Avenue, Washington, D. C.	.....do.....	Reservoirs, conduits, locks, and power houses, Lake Erie, Niagara River and watersheds between Lake Ontario and the Hudson River, N. Y.	Navigation and power for unstated uses.
40. July 31	A. P. Connor.....	Five Cent Savings Bank Building, Springfield, Mass.	Preliminary permit.....	Power project, Connecticut River, Mass. and Conn.	Not stated.
41. Aug. 3	Alabama Power Co.....	Birmingham, Ala.	.....do.....	Reservoir and power house, Coosa River, Ala.	Do.
42. Aug. 5	The Cove Co.....	Box 557, Ocala, Fla.	.....do.....	Dam and power house, Withlacoochee River, Fla.	Do.
43. Aug. 7	Big Bend Power Co.....	Care F. C. Moon, Room 418, Lynch Building, Lynchburg, Va.	.....do.....	Power project, James River, Va.	Do.
44. Aug. 9	Hugh L. Cooper.....	101 Park Avenue, New York City	.....do.....	Reservoir, conduit, and power house, Clark Fork of the Columbia River, Wash.	Do.
45. Aug. 9	The Niagara Gorge Power Co.	604 Ellicott Square, Buffalo, N. Y.	.....do.....	Division of water for power purposes, Niagara River, N. Y.	Do.
46. Aug. 10	W. A. Dromgold.....	York, Pa.	Preliminary permit.....	Dam and power house, Susquehanna River, Pa.	Do.
47. Aug. 10	Moore's Creek Boulder Gold & Dredging Co.	Care Clinton H. Hartson, Boise, Idaho.	License.....	Transmission line, Idaho.	To transmit electric energy to the works of the applicant for use in connection with its mining operations.
48. Aug. 20	State of Illinois.....	Care the Governor, Springfield, Ill.	.....do.....	Navigation and power projects, Desplaines and Illinois Rivers, Ill.	Improvement of navigation and development of power for unstated uses.
49. Aug. 20	Tri-State Power & Milling Co. and Tri-State Power Co.	Salem, Va.	Preliminary permit.....	Reservoir and power house, New River, Va. and W. Va.	Do.
50. Aug. 25	Tongass Alaska Pulp & Paper Co.	817-823 Alaska Building, Seattle, Wash.	.....do.....	Reservoirs, conduits, and power houses, Fish Creek, Swan Creek, High Lake, Mirror Lake, and Swan Lake, Tongass National Forest, Alaska.	Manufacture of pulp and paper.
51. Aug. 23	Village of Grand Rapids.....	Grand Rapids, Minn.	.....do.....	Power plant at Government dam on Mississippi River, Minn.	Municipal.
52. Sept. 7	City of Dothan.....	Dothan, Ala.	.....do.....	Power project, Choctawhatchee River, Ala.	Do.
53. Sept. 7	W. T. Larimore, Leo E. Mills, and Charles E. Bailey.	Hugo, Okla.	.....do.....	Power project, Little River, Okla.	Not stated.

List of applications before the Federal Power Commission—Continued.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920.					
54. Sept. 7	Washington Development Corporation.	1020 L. C. Smith Building, Seattle, Wash.	Preliminary permit.	Power and irrigation project, Dungeness River and West Fork Creek, Olympic National Forest, Wash.	Power and irrigation.
55. Sept. 9	Reed Bingham.	Box 228, Pensacola, Fla.	.....do.....	Power projects, Perdido, Styx, and Blackwater Rivers, Ala. and Fla.	Not stated.
56. Sept. 9	William F. Scheffel.	Box 891, Wenatchee, Wash.	.....do.....	Power and irrigation project, Columbia River, Wash.	Power and irrigation.
57. Sept. 14	Columbia Valley Power Co.	Care of Robert O. Hayward, president, 28 Nassau Street, New York City.	.....do.....	Dams, conduits, power houses, Deschutes River, Oreg.	Manufacturing and irrigation.
58. Sept. 20	Luther Hill.	Independence, Calif.	License.	Dam, conduit, power house, Sawmill Creek, Calif.	Pumping for irrigation for farm power and light.
59. Sept. 22	Edward L. Beyard.	Seligman, Ariz.	Preliminary permit.	Colorado River, Ariz., Nev., Hualapai Indian Reservation.	Not stated.
60. Sept. 23	L. J. Vogter.	3567 East B Street, Tacoma, Wash.	.....do.....	Orchard Lake (Shrimp Bay), Swau Lake (Carroll Inlet), Fish Creek (Thorne Arm), Shlockum Lake (Bailey Bay), Alaska.	Manufacture of pulp and paper.
61. Sept. 27	William D. Grant, B. Y. Grant, Donald Sinclair, S. C. Shurick.	Care of William D. Grant, Wrangell, Alaska.	.....do.....	Crittenden Creek, Mill Creek, Bradfield River, Alaska.	Mining, manufacture of pulp paper, etc.
62. Oct. 5	A. P. Seybold.	1213 Hobart Building, San Francisco, Calif.	.....do.....	Power project, Klamath River and Bluff Creek, Klamath National Forest, Calif.	Not stated.
63. Oct. 9	Alaska Endicott Mining & Milling Co.	Care John B. Marshall, attorney at law, Juneau, Alaska.	.....do.....	Power project, unnamed stream and lake near the head of William Henry Bay (Lynn Canal), Alaska.	Mining.
64. Oct. 11	Sespe Light & Power Co.	Suite 305, Merchants Trust Building, Los Angeles, Calif.	.....do.....	Reservoirs, conduits, and power houses, Piru Creek, Santa Barbara National Forest, Calif.	Not stated.
65. Oct. 11	William Park Mills.	Care Philip S. Brown, attorney and counselor, 607 Montana Building, Missoula, Mont.	.....do.....	Reservoir, conduit, and power house, Vermillion River, Cabinet National Forest, Mont.	To supply electricity to mining district in T. 25 N., R. 30 W., M. P. M.
66. Oct. 14	Spirit Lake Railway & Power Co.	Care Joseph Roane, president, 110 East Twelfth Street, Vancouver, Wash.	.....do.....	Toutle River and Spirit Lake, Columbia National Forest, Wash.	Public service, timbering, and milling, and (or) mining.
67. Oct. 18	Southern California Edison Co.	Care G. C. Ward, vice president, Edison Building, Los Angeles, Calif.	License.	Dam, conduit, power house, and transmission line, Big Creek, Fresno County, Calif.	Public utility.
68. Oct. 16	Wenatchee Commercial Club	V. H. Clearman, secretary, Wenatchee, Wash.	Preliminary permit.	Dam and power house, Rock Island and Cabinet Rapids, Columbia River.	Not stated.
69. Oct. 18	United Mills Co.	Care H. J. Holbrook, secretary, Hickory, N. C.	.....do.....	Dams, power houses, and transmission lines, Harpers Creek, Caldwell County, N. C.	For running cotton mill and public utility in Morristimer, N. C.

70. Oct. 21	Rock Creek Power Co.....	Care John Shaughnessy, president, R. F. D. No. 2, Missoula, Mont.	License.....	Reservoir conduit and power house, Rock Creek, Granite County, Mont., in Missoula National Forest.	Power, lighting, heating, mining, manufacturing, and other useful purposes. Public utility in Sacramento Valley, Calif.
71. Oct. 21	H. H. Wadsworth.....	Holbrook Building, San Francisco, Calif. *	Preliminary permit.	Reservoir, conduit, power house, and transmission line, Middle Yuba between Kenaka and Dobbins Creek, Calif.; Tahoe National Forest, Calif.	Public utility.
72. Oct. 19	Southern Sierras Power Co....	A. B. West, general manager, Riverside, Calif.	.....do.....	Three power plants, reservoirs, conduits, and transmission lines, Convict Creek, Inyo Forest Reserve, Calif.	Not given.
73. Oct. 23	J. G. Van Zandt.....	Care W. L. Huber, First National Bank Building, San Francisco, Calif.	.....do.....	Reservoir, conduit, and power house on Bear and Santa Anna Creek, Calif.	For reduction of ores.
74. Oct. 23	Electro Metals Co., a trust, W. G. Devereux, president.	729 Call Building, San Francisco, Calif.	.....do.....	Dam, reservoir, tunnels, penstocks, power house, and to divert 300 second-feet from Salmon River.	In mines, mills, pumping.
75. Oct. 26	R. G. McDonald.....	Williams, Calif.	.....do.....	Two power plants, reservoirs, conduits, and transmission lines, Convict Creek, Inyo Forest Reserve, Calif.	Mining and lighting.
76. Oct. 25	J. Harvey Pierce.....	438 Elmwood Avenue, Los Angeles, Calif.	.....do.....	Three dams and three power houses—transmission, Mammoth Creek, Inyo Forest Reserve, Mono County, Calif.	Public utility.
77. Oct. 28	Snow Mountain Water & Power Co.	Pillsbury, Madison & Sutro, attorneys, Standard Oil Building, San Francisco, Calif.	.....do.....	Two dams, reservoirs, conduits, and transmission lines, South Yel River, California Forest Reserve, Calif.	Not stated.
78. Oct. 29	Western States Gas & Electric Co., H. M. Byllesby & Co., engineers and managers.	Stockton, Calif.	.....do.....	Enlargement of American River Conduit, Summerfield Ditch, and right of way for transmission line, South Fork American River, Eldorado National Forest, Calif.	Do.
79. Oct. 30	William C. Albertson and Stephen L. Mershon.	Fort, Hunt, & Shipman, attorneys, Newark, N. J.	.....do.....	Dam, power house, transmission, Delaware River at Foul Rift, 2 miles south of Belvidere, N. J.	For mining operations of the company.
80. Nov. 1	Amazon Dixie Mining Co.....	Wallace, Idaho.....	License.....	To construct transmission line over Lolo National Forest in Missoula County, Mont.	Public utility in Lenoir, N. C.
81. Nov. 2	Granite Falls Manufacturing Co., A. A. Shuford, secretary.	Granite Falls, Caldwell County, N. C.	Preliminary permit.	Dam and reservoir, conduit, power house, and transmission line on Wilson Creek, Caldwell County, N. C.	Public utility.
82. Nov. 3	Alabama Power Co.....	Birmingham, Ala.....	License.....	Dam, power plant, and transmission line, Coosa River at Duncans Rifle, Ala.	Power to quarry.
83. Nov. 3	Paving Granite Quarry Co....	Rapid City, S. Dak.....	.....do.....	Transmission line 1 mile long in Black Hills National Forest Reserve.	Public utility.
84. Nov. 3	Ronan, town of, mayor, John P. Sweet.	Missoula County, Mont.....	Preliminary permit.	Dam, power house, and transmission line on public lands, Crow Creek, Missoula County, Mont.	Do.
85. Oct. 30	Southern California Edison Co. (Salmon Creek), Reservoir, Horse Creek diversion.	Edison Building, Los Angeles, Calif...	License.....	Diversion dam and conduit leading Horse Creek into Salmon Creek. Dam and storage reservoir on Salmon Creek to regulate flow of water to applicant's plants on Kern River.	

List of applications before the Federal Power Commission—Continued.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920.					
86. Nov. 10	John Daniell.....	Care Colonial Hotel, Springfield, Mo..	License.....	Dam in Current River at sec. 14, T. 28 N., R. 3 W., Shannon County, Mo.	Not stated.
87. Nov. 9	Coast Valleys Gas & Electric Co.	Care Chickering & Gregory, 1232 Merchants Exchange Building, San Francisco, Calif.	.....do.....	Transmission line across public lands, from T. 18 S., R. 10 E., to T. 17 S., R. 12 E., San Benito, Calif.	Power to quicksilver mines.
88. Nov. 12	Merced Irrigation District (a municipality).	Merced, Merced County, Calif.....	Preliminary permit.	Dam at Exchequer on Merced River for irrigation and power.	To sell power to San Joaquin Light & Power Co., and operation of drainage pumps in the irrigation district. Public utility.
89. Nov. 15	Garland Hydro Electric Power Co.	Care Lemuel Sparkman, 113 Fulk Building, Little Rock, Ark.	License.....	Two dams and reservoirs and one power house on the Ouachita River near the boundary between Montgomery and Garland Counties, Ark. Little Colorado River development on	Not stated
90. Nov. 15	Frank G. Baum.....	1901 Hobart Building, San Francisco, Calif.	.....do.....	River at Grant Falls, Tolandco, and at Cocouino, both points in Arizona.	Do.
91. Nov. 15	.....do.....	.....do.....	.....do.....	Power development on Black River, Ariz..	Do.
92. Nov. 18	W. H. Shrader.....	21 East Gonzales Street, Pensacola Fla.	Preliminary permit.	Power development at the United States Government dam on the Sunflower River in Washington County, Miss.	Power for pulp mill.
93. Nov. 18	R. L. Weeks, major, retired.	United States Army recruiting station, Fourth and Main Streets, Los Angeles, Calif.	.....do.....	Power development at Shrimp Bay, Tongass National Forest, Alaska.	Do.
94. Nov. 18	Alaskan-American Paper Corporation.	23 East Twenty-sixth Street, New York City.	.....do.....	Dam and power house at Orchard Lake outlet to Shrimp Bay, Revillagigedo Island, Tongass National Forest, Alaska.	Not stated.
95. Nov. 18	Emma Rose and Anna G. Lane (Utica Mining Co.).	Utica Mining Co., 1128 Merchants Exchange Building, San Francisco, Calif.	License.....	Power development on Stanislaus River, Calif.	Public utility.
96. Nov. 18	San Joaquin Light & Power Corporation.	Fresno, Calif.....	.....do.....	Dam, reservoir, conduit, power house, and transmission line, San Joaquin River, Fresno and Madera Counties, Calif.	Do.
97. Nov. 18	The Nevada-California Power Co.	Care W. L. Huber, First National Bank Building, San Francisco, Calif.	.....do.....	Two conduits diverting Warren Creek and Slate Creek into Leevining Creek; two dams and power houses on Leevining Creek, Mono County Mono National Forest, Calif.; on Bishop Creek, near Bishop, Inyo County, Calif., in the Inyo National Forest, and 60 miles from the Leevining Creek projects are two projects, Plant A and Plant No. 1.	

98. Nov. 18	City of Los Angeles.....	Department of Public Service, 603 Knickerbocker Building, Los Angeles, Calif.	Preliminary permit.	Five dams and reservoirs, with tunnels and conduits leading to four power houses on the South and Middle Forks and on Kings River, Fresno County, Calif.	Do.
99. Nov. 20	Western States Gas & Electric Co.	H. M. Byllesby, engineers and managers, Stockton, Calif.	License.....	Conduit, power house, and transmission line, Trinity National Forest, in Trinity and Humboldt Counties, Calif.	Do.
100. Nov. 23	Flathead Valley Electric Co.	Old National Bank Building, Spokane, Wash.	Preliminary permit.	Small dam at Lake Outlet, use tunnel dug by United States Reclamation Service, power house, and transmission lines; Flathead River at Lake Outlet, Flathead County, Mont.	Do.
101. Nov. 24	Catawba Valley Light & Power Co.	Care M. H. L. Millner, Morganton, N. C.	.....do.....	Dam, conduit, power house, and transmission lines, Wilson Creek, Caldwell County, N. C.	Not stated.
102. Nov. 2	San Joaquin Light & Power Corporation.	Fresno, Calif.....	.....do.....	Dams, reservoirs, diversion conduits, and power house on North Fork, Kings River, Fresno, Calif.	Public utility.
103. Nov. 22	Frank B. Pattee, Samuel Bernhard, and J. T. Ross.	Care, Edward R. Solinsky, the Call Building, San Francisco, Calif.	Preliminary permit.	Dam, reservoir, 11 $\frac{1}{2}$ -mile conduit, power house, and 100 mile transmission line. North Fork, Stanislaus River, T. 6 N., R. 16 E., to T. 5 N., R. 15 E., M. D. M., Calaveras and Tuolumne Counties, Calif.	Not stated.
104. Nov. 26	Home Colony, an association of citizens.	L. R. Ewart, president, Cody, Wyo....	License.....	Small plank dam, 400 foot conduit, and small power house, Kitty Creek, Park County, Wyo.	For small community.
105. Nov. 22	Southern California Edison Co.	Care Mr. G. C. Ward, Edison Building, Los Angeles, Calif.	Preliminary permit	7 dams, and reservoirs, 6 diversion dams, 12 conduits, and 3 power houses in headwaters of San Joaquin River in general area, T. 4 S., to T. 9 S., and R. 23 E., to R. 28 E., Madera and Fresno Counties, Calif.	Public utility.
106. Nov. 19	Mrs. Nellie P. Bean.....	Care Cotton & Wilson, Post Building, Idaho Falls, Idaho.	.....do.....	Dam 9 feet high, 10-foot wooden pipe line to power house. On Warm River, between Mesa and Warm River, Fremont County, Idaho.	Do.
107. Nov. 30	Butte-Jardine Metals Mines Co.	Care Mr. Charles R. Leonard, Butte, Mont.	License.....	Transmission line across part of Deer Lodge National Forest, T. 6 N., R. 8 to 9 W., Deer Lodge County, Mont.	Power to company's mine.
108. Dec. 2	Wisconsin-Minnesota Light & Power Co.	Care Mr. Charles McPerson, 1107 Grand Rapids Savings Building, Grand Rapids, Mich.	.....do.....	Dam and reservoir at Forks of Chippewa River, Sawyer County, Wis.	Public utility.
109. Oct. 26	Joseph B. Leighton.....	Miles City, Mont.....	Preliminary permit.	Diversion dam, conduit, and power house, Yellowstone River, at Buffalo Rapids, near Miles City, Mont.	Do.
110. Dec. 2	Southern California Edison Co.	Edison Building, Los Angeles, Calif....	License.....	5 dams, 4 reservoirs and conduits, 2 power houses on head waters South Fork San Joaquin River, Fresno County, Calif.	Do.

List of applications before the Federal Power Commission—Continued.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920. 111. Dec. 4	Southern California Edison Co.	Edison Building, Los Angeles, Calif.	Preliminary permit.	High dam and large storage reservoir near Lee Ferry, Colorado River, in Coconino County, Ariz. Development of all available power in the river between the storage dam and the western boundary of Arizona, with the exception of that section of the river lying within the Grand Canyon National Park, which part is excluded from the proposed development.	Public utility in 8 Western States.
112. Dec. 4	City of Everett.....	Mr. W. H. Clay, mayor, Everett, Snohomish County, Wash.	.....do.....	Diversion dam and tunnel to carry 500 cubic feet seconds from Sultan River to Lake Chaplain, used as a storage reservoir; 81-inch conduit from Lake Chaplain to power house on Sultan River. In general locality, T. 28 N., R. 8 E., Snohomish County, Wash.	Public utility.
113. Dec. 4	Great Basin Power Co.	Walker Bank Building, Salt Lake City Utah.	.....do.....	Dam and reservoir, North Fork Duchesne River in secs. 22, 23, 26 and 27, T. 2 N., R. 9 W., Uintah special base and meridian. Conduit to power house in sec. 19, T. 1 N., R. 8 W. Diversion of West Fork Duchesne River and Wolf Creek by conduit to same power house, Utah. Power development on McKinley River, Wonder Lake, Kantishna mining district, Alaska.	Do.
114. Dec. 6	Mount McKinley Gold Placers.	Tanana, Alaska.....	.....do.....	Dam at High Island, above Chain Bridge, and at Plummer Island, 4 miles below Great Falls, on Potomac River, D. C.	Mining purposes.
115. Dec. 8	W. H. H. Stineman, Alfred M. Quek.	Gunther Building, Baltimore, Md.	Preliminary permit.	Diversion dam, conduit and power house, Owens River, T. 5 S., R. 31 E., M. D. M., Mono County, Calif.	Public utility.
116. Dec. 8	Southern Sierras Power Co.	Care, Mr. W. L. Huber, First National Bank Building, San Francisco, Calif.	License.....	Transmission line from the power house described in project No. 116, for a distance of 9 miles, to connect with the existing transmission system of the applicant, at a point in Inyo County, Calif.	Do.
117. Dec. 8	.....do.....	.....do.....	.....do.....	Dam, reservoir, and power house, Spokane River at Fort George Wright, Wash. Diversion dam, 11-mile conduit with two power houses, one at point of miles below dam, and second 4½ miles below first.	Do.
118. Dec. 6	Lloyd E. Gandy.....	803 Sherwood Building, Spokane, Wash.	Preliminary permit.		Not stated.
119. Dec. 9	Frank L. Ballaine.....	Mr. James A. Haight, 702 Haight Building, Seattle, Wash.	.....do.....		Pulp and paper mill and public utility.

LIST OF APPLICATIONS RECEIVED DURING THE WEEK ENDING DEC. 18, 1290.

120. Dec. 2	Southern California Edison Co.	Edison Building, Los Angeles, Calif.	.....do.....	On Kenai River above Skilak Lake, in Chugach National Forest, 38 miles from Seward, Alaska.	Public utility.
121. Dec. 11	James B. Girard.	Care, Parsons, Klapp, Brinckerhoff, and Douglas, 84 Pine Street, New York City.	License.....	Dam, conduit, and power house on San Joaquin River, below the mouth of Big Creek, Fresno County, Calif. Power development in the Colorado River, at Diamond Creek, Ariz.	Railroad electrification and public utility.
122. Dec. 11	City of Los Angeles.....	Department of Public Service, 603 Knickerbocker Building, Los Angeles, Calif.	Preliminary permit.	Dam and re-reservoir, conduit and power house on South Fork, Kings River, just above location of project No. 98, city of Los Angeles.	Public utility.
123. Dec. 11	.....do.....	.....do.....	.....do.....	Dam and storage reservoir, diversion dam, conduits and power houses at Owens River Gorge, in Mono and Inyo Counties, Calif.	Do.
124. Dec. 13	Southern Sierras Power Co....	Care of Mr. W. L. Huber, First National Bank Building, San Francisco, Calif.	.....do.....	Divert water from North Fork to South Fork of Whitewater River, second diversion dam and 12-mile conduit to power house on main river in sec. 5, T. 2 S., R. 3 E., S. B. M. Third diversion dam and 12-mile conduit to second power house on Whitewater River in sec. 26, T. 2 S., R. 3 E., in San Bernardino and Riverside Counties, Calif.	Do.
125. Dec. 13	.....do.....	.....do.....	.....do.....	Three diversion dams and 7-mile conduit and power house at headwaters San Gabriel River, Los Angeles County, Calif.	Do.
126. Dec. 13	John R. Love and G. A. von Brecht.	Care of Mr. J. D. Fisher, Colorado Springs, Colo.	License.....	Dam, diversion tunnel, power house, tail-race, transformer-house, and transmission line, Salmon River, Custer County, Idaho.	Mining and milling.
127. Dec. 10	Goodwin M. Trent.....	317 Sharon Building, San Francisco, Calif.	Preliminary permit.	Dam and reservoir, sec. 25, T. 11 N., R. 18 E., M. D. M. 134-mile pipe line, power house in sec. 27, T. 12 N., R. 19 E., East Fork Carson River, Alpine County, Calif.	Mining, reclamation, public utility.
128. Dec. 14	City of Los Angeles.....	Department of Public Service, 603 Knickerbocker Building, Los Angeles, Calif.	.....do.....	Dam, storage reservoir, conduit, and power house, South Fork of Kern River, Tulare County, Calif.	Public utility.
129. Dec. 15	William R. Rust.....	1208 Fidelity Building, Tacoma, Wash.	.....do.....	Small diversion dam, 2,000-foot pipe line and power house with 250-horsepower capacity in Cann Creek, 1 mile from Lisianski Inlet, Sitka mining district, Alaska.	Mining purposes.

List of applications before the Federal Power Commission—Continued.

LIST OF APPLICATIONS RECEIVED DURING THE WEEK ENDING DEC. 25, 1920.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920. 130. Dec. 18	Grace S. Eyre.....	Buena Vista, Calif.....	License.....	Diversion dam, pipe line, power house, and transmission line, Chalk Creek, T. 15 S., R. 79 W., sixth principal meridian, Chaffee County, Colo.	Public utility.
131. Dec. 20	Spanish Belt Silver Mining Co.....	629 Nicholas Building, Toledo, Ohio.....	do.....	Transmission line, 5 miles long, from sec. 6, T. 8 N., R. 43 E., to sec. 24, T. 9 N., R. 44 E., M. D. M., Nye County, Nev.	Transmit power for mining purposes.
132. Dec. 21	W. E. Epperson.....	555 Colman Building, Seattle, Wash.....	Preliminary permit.....	Dams at outlet to Summit, Josephine, and Mellem lakes; a 2,000-foot tunnel, three pipe lines, and two power houses at Copper Harbor, Hetta Inlet, Prince of Wales Island, Alaska.	Pulp mill.
133. Dec. 22	Kantishna Hydraulic Mining Co.....	Care of Mr. J. A. Sutherland, Fairbanks, Alaska.	do.....	Divert McKinley Fork into Wonder Lake; dam at lake outlet and conduit to power house at confluence of El Dorado and Moose Creeks, Kantishna mining district, Alaska.	Mining purposes.
134. Dec. 23	City of Los Angeles.....	Department of public service, 603 Knickerbocker Building, Los Angeles, Calif.	License.....	Transmission line in Inyo and Los Angeles Counties, Calif.	Public utility.

LIST OF APPLICATIONS RECEIVED DURING THE WEEK ENDED JAN. 1, 1921.

Serial No. and date of receipt.	Name.	Address.	Applying for—	Project.	Proposed use.
1920. 135. Dec. 24	Portland Railway, Light & Power Co.....	Portland, Oreg.....	Preliminary permit.....	Dam, reservoir, conduit, and power house, Oak Grove, on the Clackamas River, Oreg.	Public utility.
136. Dec. 27	Maurice D. Lechey.....	620 Alaska Building, Seattle, Wash.....	do.....	Power development at Beaver Falls and Lake Mahoney, near Ketchikan, Alaska.	Not stated.
137. Dec. 27	Mary Ives Crocker and J. W. Preston, Jr.....	350 Post Street, San Francisco, Calif.....	do.....	Dam, conduit, reservoir, power house, and transmission lines, North Fork, Mokelumne River, T. 8 N., R. 16 E., M. D. M., Amador County, Calif.	Public utility.
138. Dec. 28	George C. Hazelt.....	Cordova, Alaska.....	do.....	Dam at outlet of Silver Lake, 7,000-foot pipe line, power house, and 1-mile transmission line to pulp mill. Duck River at head of Galena Bay, Prince William Sound, Alaska.	Pulp mill.

139. Dec. 27	C. E. Loose.....	Provo, Utah.....	License.....	Dam and reservoir, conduit, power house, and transmission line, East Walker River, Mono County, Calif.	Mining, milling, and public utility.
140. Dec. 29	Paul Butler.....	233 West Monroe Street, Chicago, Ill..	Preliminary permit.	Dam at outlet of Swan Lake, pipe line to power house on beach at Carroll Inlet. Dam at outlet of Mirror Lake and pipe line to power house at head of Big Lake. Dam at outlet of Big Lake and pipe line to power house on Fish Creek above lower lake. Transmission lines to pulp mill at mouth of Fish Creek, on Thorne Arm, 25 miles from Ketchikan, Alaska. Power development on the Deschutes River, Oreg. (Metolius site).	Pulp mill.
141. Dec. 29	H. S. McGowan.....	McGowan, Wash.....	do.....	Power development on the Deschutes River, Oreg. (reclamation site).	Not stated.
142. Dec. 29	do.....	do.....	do.....	Divert Deep Creek and Camas Creek to a common power house on Deep Creek, in sec. 14, T. 39 S., R. 22 E., Trans- mission line 20 miles to Lakeview, Lake County, Oreg.	Do.
143. Dec. 28	S. A. Mushen and G. D. Cronemiller.	Lakeview, Oreg.....	do.....		Public utility.

LIST OF APPLICATIONS RECEIVED BY THE FEDERAL POWER COMMISSION DURING THE WEEK ENDING JAN. 8, 1921.

1921.					
144. Jan. 5	Idaho Power Co.....	Care of M. O. Leighton, McLachlen Building, Washington, D. C.	License.....	Transmission line 24 miles long from Blackfoot to Pocatello, Idaho.	Public utility.
145. Jan. 3	Harold Winter.....	Care of Mr. Worth W. Trammell, Tallahassee, Fla.	Preliminary permit.	Power development in Turkey Creek, at Turkey Creek Hill, near Valpariso, Fla.	Do.
1920.					
146. Dec. 18	Great Western Power Co.....	233 Post Street, San Francisco, Calif.....	do.....	Dam and reservoir, 18-mile conduit, and power house on North Fork of Feather River, T. 20 and 21 N., R. 4 E., M. D. M., near Oroville, Butte County, Calif.	Do.

List of applications before the Federal Power Commission—Continued.

Number of application.	Name of applicant.	Application.					Location.			Capacity (horsepower).	Conflict.			State.
		Formal.	Informal.	Preliminary permit.	License.	Declaration of intent.	Public lands.	National forest.	Indian reservation.		With Case No.	Capacity (horsepower).	Valuation required.	
1	Dixie Power Co.....	X		X					X	100,000				Arkansas.
2	G. W. Sperry.....	X	X					X		5,000				Idaho.
3	Washington Irrigation & Development Co.	X		X			X		X	300,000				Washington.
4	Speel River project..	X		X				X		10,000				Alaska.
5	Rocky Mountain Power Co.	X		X			X	X		272,000	34			Montana.
6	Niagara County Irrigation & Water Supply Co.	X		X					X	75,000	{ 14, 15 }	5,000		New York.
7	Roanoke River Development Co.	X		X					X	60,000				Virginia.
8	St. Lawrence Transmission Co.	X		X					X	900,000	23	150,000		New York.
9	Pitt River Power Co.	X		X			X	X		92,000				California.
10	Sound Power Co.....	X		X				X		106,000				Washington.
11	Straits Power Co.....	X		X				X		95,000	35	5,000		Do.
12	Big Horn Canyon Irrigation & Power Co.	X		X			X		X	217,550				Montana.
13	Ford Motor Co.....	X			X				X	8,250				New York.
14	Western New York Utilities Co. (Inc.).		X	X					X	10,000			X	Do.
15	Hydraulic Race Co..		X	X					X	5,000			X	Do.
16	The Niagara Falls Power Co.	X			X				X	1400,000	{ 14, 15 }	10,000	X	Do.
17	Western Tie & Timber Co.	X		X					X	4,000	86			Missouri.
18	Idaho Power Co.....	X		X			X			25,000				Idaho.
19	do.....	X		X			X			66,000				Do.
20	Utah Power & Light Co.	X		X			X	X		21,500				Do.
21	W. R. Banks.....	X		X					X	2,000				Missouri.
22	Paul T. Brady.....		X	X					X	228,600	{ 79, 31 }	20,000		New York and Pennsylvania.
23	Louisville Power Corporation.	X		X					X	600,000	8			New York.
24	Lower Niagara River Power & Water Supply Co.	X		X					X	1250,000	6	75,000		Do.
25	{ Niagara, Lockport, & Ontario River Power Co.	X		X					X		{ 16, 37 }		X	Do.
26	City of Buffalo.....		X	X					X					Do.
27	Courtland P. Chennault.		X	X					X	3,000				Oklahoma.
28	Markham, Kelsey & Druar.		X	X					X	11,000				Minnesota.
29	St. Cloud Electric Power Co.		X	X					X	6,000				Do.
30	Beckman & Linden Engineering Corporation.	X		X			X		X	126,000				Arizona and California.
31	Canada Syndicate (Ltd.) et al.	X		X					X	432,300	{ 79, 22 }	228,600		New Jersey.
32	R. W. Hawley.....	X		X			X	X		107,000				California.
33	C. A. Heberlein.....		X	X			X			9,000				Arizona.
34	Montana Water Power & Electric Co.		X	X			X		X		5			Montana.
35	Northwestern Power & Manufacturing Co.		X	X			X	X		5,000	11		X	Washington.
36	Polson, Reed & Abel		X	X				X						Do.
37	Thomson & Porter..	X		X					X	900,000	{ 45, 39 }	500,000		New York.
38	Crown Williamette Paper Co.		X		X				X	7,200			X	Oregon.

¹ If treaty is modified to permit the diversion of 20,000 cubic feet per second additional, these figures will be increased by 100,000 horsepower.

List of applications before the Federal Power Commission—Continued.

Number of application.	Name of applicant.	Application.				Location.				Capacity (horsepower).	Conflict.		Valuation required.	State.
		Formal.	Informal.	Preliminary permit.	License.	Declaration of intent.	Public lands.	National forest.	Indian reservation.		With Case No.	Capacity (horsepower).		
39	Millard F. Bowen.....	X		X					X	800,000	16	400,000		New York.
40	A. P. Connor.....		X	X					X	20,000				Connecticut and Massachusetts.
41	Alabama Power Co.	X		X					X	30,000				Alabama.
42	The Cove Co.....		X	X					X	4,000				Florida.
43	Big Bend Power Co.		X	X					X	8,000				Virginia.
44	Hugh L. Cooper.....		X	X			X	X	X	350,000				Washington.
45	Niagara Gorge Power Co.	X		X					X	300,000	24	250,000		New York.
46	W. A. Dromgold.....		X	X					X	20,000				Pennsylvania.
47	Moore's Creek Boulder Gold & Dredging Co.	X			X		X			(²)				Idaho.
48	State of Illinois.....	X		X					X	40,000				Illinois.
49	Tri-State Power & Milling Co., and Tri-State Power Co.		X	X					X	30,000				West Virginia.
50	Tongass Alaska Pulp & Paper Co.		X	X				X		19,000	60			Alaska.
51	Village of Grand Rapids, Minn.		X	X					X					Minnesota.
52	City of Dothan, Ala.		X	X					X					Alabama.
53	E. T. Larimore, L. E. Mills, and C. E. Bailey.		X	X			X		X	1,500				Oklahoma.
54	Washington Development Corporation.		X	X				X						Washington.
55	Reed Bingham.....	X		X					X	4,600				Florida and Alabama.
56	William F. Scheffel.		X	X			X		X	100,000				Washington.
57	Columbia Valley Power Co.	X		X			X		X	378,000				Oregon.
58	Luther Hill.....	X			X		X	X		386				California.
59	Edw. L. Beyard.....	X		X			X	X	X	420,000				Arizona and Nevada.
60	L. J. Vogter.....	X		X				X		32,000	$\left\{ \begin{array}{l} 50 \\ 93 \\ 94 \end{array} \right\}$	$\left\{ \begin{array}{l} 19,000 \\ 7,000 \end{array} \right\}$		Alaska.
61	Wm. D. Grant et al.		X	X			X	X		16,000				Do.
62	A. P. Seybold.....	X		X			X	X		31,200				California.
63	Alaska Endicott Mining & Milling Co.		X	X			X			300				Alaska.
64	Sespe Light & Power Co.	X		X				X		15,000				California.
65	Wm. Park Mills.....	X		X				X		600				Montana.
66	Spirit Lake Ry. & Power Co.	X		X				X		10,000				Washington.
67	South California Edison Co.	X			X			X		120,000			X	California.
68	Wenatchee Commercial Club.		X	X			X		X	100,000				Washington.
69	United Mills Co.....	X		X				X		1,400				North Carolina.
70	Rock Creek Power Co.	X			X		X	X		428				Montana.
71	H. H. Wadsworth.....		X	X			X	X		30,000				California.
72	So. Sierras Power Co.		X	X			X	X		6,800	75	4,000		Do.
73	J. G. Van Zandt.....	X		X				X		37,000				Do.
74	Electric Metals Co.	X		X				X		143,000				Do.
75	R. G. McDonald.....	X		X			X	X		4,000	72			Do.
76	J. Harvey Pierce.....		X	X				X		737				Do.
77	Snow Mount Water & Power Co.	X			X			X		15,000			X	Do.

² Transmission line.

List of applications before the Federal Power Commission—Continued.

Number of application	Name of applicant.	Application.					Location.				Capacity (horsepower).	Conflict.		Valuation required.	State.		
		Formal.	Informal.	Preliminary permit.	License.	Declaration of intent.	Public lands.	National forest.	Indian reservation.	Navigable waters.		With Case No.	Capacity (horsepower).				
78	Western States Gas & Electric Co.	X	...	X	...	...	X	X	...	...	72,000	...	...	X	California.
79	W. C. Albertson and S. L. Mershon.	}	X	X	...	...	...	...	...	X	20,000	{ 22 31 }	...	...	New Jersey.
80	Amazon Dixie Mining Co.		X	...	X	X	...	(2)		Montana.	
81	Granite Falls Manufacturing Co.	X	...	X	...	...	...	X	...	...	2,000	...	...	...	North Carolina.
82	Alabama Power Co.	X	...	...	X	...	...	...	...	X	120,000	...	...	...	Alabama.
83	Paving Granite Quarry Co.	X	...	...	X	...	...	X	...	...	(2)	...	...	...	South Dakota.
84	Town of Ronan, Mont.	X	...	X	...	...	X	...	X	...	200	...	...	...	Montana.
85	Southern California Edison Co.	X	...	...	X	...	...	X	...	...	7,500	...	...	X	California.
86	John Daniell.	...	X	...	X	...	...	...	...	X	30,000	17	4,000	...	Missouri.
87	Coast Valley Gas & Electric Co.	X	X	...	X	(2)	California.	
88	Merced irrigation district.	X	...	X	...	...	X	...	...	...	40,000	...	...	...	Do.
89	Garland Hydro-Electric Power Co.	X	...	...	X	...	X	X	...	X	25,000	...	...	...	Arkansas.
90	Frank G. Baum	X	...	...	X	...	X	...	X	...	27,900	...	...	...	Arizona.
91	do.	X	...	...	X	...	X	X	...	...	6,300	...	...	...	Do.
92	W. H. Shrader	...	X	X	...	...	...	...	...	X	1,500	...	...	...	Mississippi.
93	R. L. Weeks	X	...	X	...	...	...	X	...	...	7,000	{ 60 94 60 93 }	7,000	...	Alaska.
94	Alaskan - American Paper Corporation.	X	...	X	X	7,000			Do.
95	Utica Mining Co.	X	X	...	X	X	30,000			X	California.
96	San Joaquin Light & Power Corporation.	X	...	...	X	...	X	X	...	...	45,000	...	...	X	Do.
97	Nevada - California Power Co.	X	...	...	X	...	...	X	...	...	19,000	...	...	X	Do.
98	Los Angeles, City of	X	...	X	...	...	...	X	...	...	400,000	...	...	...	Do.
99	Western States Gas & Electric Co.	X	...	...	X	...	X	X	...	...	2,500	...	...	X	Do.
100	Flathead Valley Electric Co.	X	...	X	...	...	...	X	...	...	650	...	...	...	Montana.
101	Catawba Valley Light & Power Co.	...	X	X	...	...	...	X	...	...	2,500	81	2,500	...	North Carolina.
102	San Joaquin Light & Power Corporation.	...	X	X	...	...	...	X	...	...	150,000	...	...	...	California.
103	Pattee, Bernhard & Ross.	...	X	X	...	...	...	X	...	...	3,000	...	...	...	Do.
104	Home Colony	X	...	...	X	...	...	X	...	...	10	...	...	...	Wyoming.
105	Southern California Edison Co.	X	...	...	X	...	...	X	...	...	800,000	...	...	...	California.
106	Mrs. Nellie P. Bean.	...	X	X	...	...	...	X	...	...	1,840	...	...	...	Idaho.
107	Butte-Jardine Metals Mines Co.	X	...	...	X	...	...	X	...	...	(2)	...	...	...	Montana.
108	Wisconsin-Minnesota Light & Power Co.	X	...	...	X	...	X	...	X	X	75,000	...	...	...	Wisconsin.
109	Joseph B. Leighton.	X	...	X	...	...	X	...	...	...	15,000	...	...	...	Montana.
110	Southern California Edison Co.	X	...	...	X	...	...	X	...	...	425,000	105	425,000	(3)	California.
111	do.	X	...	X	...	...	X	X	X	...	3,570,000	{ 59 121 }	420,000	...	{ Utah and Arizona. Washington. Utah.
112	City of Everett	X	...	X	X	10,000		
113	Great Basin Power Co.	X	...	X	X	X	25,000		
114	Mount McKinley Gold Placers.	...	X	X	...	...	X	...	...	...	500	...	...	...	Alaska.

2 Transmission line.

3 Perhaps.

List of applications before the Federal Power Commission—Continued.

Number of application.	Name of applicant.	Application.					Location.				Capacity (horsepower).	Conflict.			State.
		Formal.	Informal.	Preliminary permit.	License.	Declaration of Intent.	Public lands.	National forest.	Indian reservation.	Navigable waters.		With Case No.	Capacity (horsepower).	Valuation required.	
115	Stineman & Quick..	X	...	X	...	...	...	...	...	X	50,000	...	...	...	District of Columbia, Maryland, and Virginia.
116	Southern Sierras Power Co.	X	...	...	X	...	X	X	X	...	9,430	123	9,430	...	California.
117	do.	X	...	...	X	...	X	X	X	...	(2)	...	...	...	Do.
118	Lloyd E. Gandy.	X	X	X	...	...	(4)	(4)	(4)	(4)	10,000	...	...	...	Washington.
119	Frank L. Ballaine.	X	...	X	...	...	...	...	...	...	10,000	...	...	...	Alaska.
120	Southern California Edison Co.	X	...	X	...	...	...	X	...	...	150,000	...	...	...	California.
121	James B. Girand.	X	...	...	X	...	X	X	X	...	60,000	111	60,000	...	Arizona.
122	City of Los Angeles.	X	...	X	...	...	...	X	...	...	60,000	...	...	...	California.
123	do.	X	...	X	...	...	X	X	X	...	25,000	116	...	...	Do.
124	Southern Sierras Power Co.	X	...	X	...	...	...	X	...	...	60,000	...	...	...	Do.
125	do.	X	...	X	...	...	...	X	...	...	30,000	...	...	...	Do.
126	Love & von Brecht.	X	...	...	X	...	...	X	...	...	400	...	...	...	Idaho.
127	Goodwin M. Trent.	X	...	X	...	...	...	X	...	...	16,800	...	...	...	California.
128	City of Los Angeles.	X	...	X	...	...	...	X	...	...	27,500	...	...	...	Do.
129	William R. Rust.	X	...	X	...	...	...	X	...	...	250	...	...	...	Alaska.
130	Grace S. Eyre.	X	...	...	X	...	X	X	...	...	700	...	...	...	Colorado.
131	Consolidated Spanish Belt Silver Mining Co.	X	...	...	X	...	...	X	...	...	(2)	...	...	...	Nevada.
132	W. E. Epperson.	X	...	X	...	...	...	X	...	...	19,000	...	...	...	Alaska.
133	Kantishna Hydraulic Mining Co.	X	X	X	...	...	X	...	...	...	500	114	500	...	Do.
134	City of Los Angeles.	X	...	...	X	...	X	...	...	...	(2)	...	...	...	California.
135	Portland Railway, Light & Power Co.	...	X	X	...	...	...	X	...	...	22,000	...	...	...	Oregon.
136	Maurice D. Leebey.	...	X	X	...	...	...	X	...	...	3,000	...	...	...	Alaska.
137	Crocker & Preston.	X	...	X	...	...	X	X	...	X	38,400	...	...	...	California.
138	George C. Hazelet.	X	...	X	...	...	...	X	...	...	12,000	...	...	...	Alaska.
139	C. E. Loose.	X	...	...	X	...	X	X	...	...	6,000	...	...	...	California.
140	Paul Butler.	X	...	X	...	...	...	X	...	...	29,000	{ 50 60 }	29,000	...	Alaska
141	H. S. McGowan.	...	X	X	...	...	X	...	...	...	387,000	57	387,000	...	Oregon.
142	do.	...	X	X	...	...	X	...	...	...	37,600	...	...	...	Do.
143	Mushen & Cronsmiller.	X	...	X	...	...	X	...	...	...	1,000	...	...	...	Do.
144	Idaho Power Co.	X	...	...	X	...	X	...	X	...	(2)	...	...	...	Idaho.
145	Harold Winter.	...	X	X	...	...	...	X	...	...	400	...	...	...	Florida.
146	Great Western Power Co.	X	...	X	...	...	X	...	...	...	5,200	...	...	...	California.
	Total.	94	52	112	34	...	56	81	15	47	15,553,930	...	3,018,030	14	
	Deduct conflict.	...	...	...	...	...	...	...	...	...	3,018,030	...	...	...
	Net total.	...	...	...	...	...	...	...	...	...	12,535,900	...	...	...

² Transmission line.⁴ Military reservation.

Net horsepower.

45 projects on navigable streams involving approximately..... 5,815,350

101 projects on public lands and reservations, involving approximately..... 6,720,550

14 projects requiring property valuation, involving approximately..... 738,200

NOTE.—Capacities of Niagara projects are listed in table as limited by diversion now authorized by treaty.

Applications by States.

State.	Number of applications.	Estimated horsepower to be developed.	State.	Number of applications.	Estimated horsepower to be developed.
Alaska.....	15	93,050	New Jersey.....	3	432,300
Alabama.....	3	150,000	New York.....	13	2,813,200
Arizona.....	7	3,739,200	North Carolina.....	3	3,400
Arkansas.....	2	125,000	Oklahoma.....	2	4,500
California.....	39	2,544,700	Oregon.....	6	445,800
Colorado.....	1	700	Pennsylvania.....	1	20,000
Connecticut.....	1	20,000	South Dakota.....	1	(¹)
District of Columbia.....	1	50,000	Utah.....	1	25,000
Florida.....	3	9,000	Virginia.....	2	68,000
Idaho.....	8	119,740	Washington.....	12	1,171,000
Illinois.....	1	40,000	West Virginia.....	1	30,000
Minnesota.....	3	17,000	Wisconsin.....	1	75,000
Mississippi.....	1	1,500	Wyoming.....	1	10
Missouri.....	3	32,000			
Montana.....	10	505,800	Total.....	146	12,535,900
Nevada.....	1	(¹)			

¹ Transmission line only.*Synopsis of projects advertised.*

Project No.	Applicant.	Date advertised.	Date limiting receipt of objections.
38	Crown-Willamette Paper Co. (Oregon).....	Oct. 2, 1920.....	Dec. 7, 1920.
3	Washington Irrigation & Development Co. (Washington).	Oct. 16, 1920.....	Dec. 24, 1920.
58	Luther Hill (California).....	Oct. 11, 1920.....	Dec. 13, 1920.
9	Pitt River Power Co. (California).....	Nov. 17, 1920 (Oct. 13, orig.).....	Feb. 10, 1921.
48	State of Illinois.....	Dec. 6, 1920 (Sept. 14, orig.).....	Feb. 16, 1921 (Nov. 15, 1920, orig.).....
1	Dixie Power Co. (Arkansas).....	Oct. 16, 1920.....	Dec. 18, 1920.
57	Columbia Valley Power Co. (Oregon).....	Nov. 16, 1920 (Oct. 29, orig.).....	Feb. 10, 1921 (Jan. 7, 1921, orig.).....
67	Southern California Edison Co. (California).....	Nov. 26, 1920 (Oct. 25, orig.).....	Jan. 20, 1921 (Dec. 29, 1920, orig.).....
55	A. Reed Bingham (Alabama and Florida).....	Oct. 28, 1920.....	Jan. 10, 1921.
82	Alabama Power Co. (Alabama).....	Nov. 12, 1920.....	Jan. 20, 1921.
6	Niagara County Irrigation & Water Supply Co. ¹	Nov. 13, 1920.....	Jan. 12, 1921.
14	Western New York Utilities Co.....	do.....	Do.
15	Hydraulic Race Co.....	do.....	Do.
16	Niagara Falls Power Co.....	do.....	Do.
24	Lower Niagara River Power & Water Supply Co.....	do.....	Do.
25	Niagara, Lockport & Ontario Power Co.....	do.....	Do.
26	City of Buffalo.....	do.....	Do.
37	J. Kennard Thomson and Peter A. Porter.....	do.....	Do.
45	Niagara Gorge Power Co. (New York).....	do.....	Do.
	Niagara County Irrigation & Water Supply Co., merged with Niagara Power & Development Co.....	Dec. 21, 1920.....	None fixed.
8	St. Lawrence Transmission Co. (New York).....	Nov. 13, 1920.....	Jan. 12, 1921.
70	Rock Creek Power Co. (Montana).....	do.....	Jan. 24, 1921.
17	Western Tie & Timber Co. (Missouri).....	Nov. 16, 1920.....	Jan. 29, 1921.
62	A. P. Seybold.....	Nov. 17, 1920.....	Feb. 10, 1921.
74	Electro Metals Co. (California).....	do.....	Do.
73	J. G. Van Zandt (California).....	Nov. 19, 1920.....	Do.
65	Wm. Park Mills (Montana).....	Nov. 20, 1920.....	Do.
20	Utah Light & Power Co. (Idaho).....	Nov. 22, 1920.....	Feb. 15, 1921.
88	Merced irrigation district (California).....	Nov. 24, 1920.....	Feb. 21, 1921.
69	United Mills Co.....	Nov. 29, 1920.....	Do.
81	Granite Falls Manufacturing Co.....	do.....	Do.
101	Catawba Valley Light & Power Co. (North Carolina).....	do.....	Do.
77	Snow Mountain Water & Power Co. (California).....	Dec. 1, 1920.....	Feb. 24, 1921.
7	Roanoke River Development Co. (Virginia).....	Dec. 10, 1920 (Dec. 4, original).....	Mar. 16, 1921 (Feb. 24, 1921, original).....
13	Henry Ford & Son (Inc.) (New York).....	Dec. 4, 1920.....	Feb. 15, 1921.
32	R. W. Hawley (California).....	Dec. 6, 1920.....	Feb. 28, 1921.
99	Western States Gas & Electric Co. (California).....	Dec. 8, 1920.....	Do.
87	Coast Valleys Gas & Electric Co. (California).....	Dec. 9, 1920.....	Do.
113	Great Basin Power Co. (Utah).....	Dec. 15, 1920.....	Mar. 9, 1921.
66	Spirit Lake Railway & Power Co. (Washington).....	Dec. 16, 1920.....	Do.
96	San Joaquin Light & Power Co. (California).....	Dec. 18, 1920.....	Do.

¹ Merged with Niagara Power & Development Co.

Synopsis of projects advertised—Continued.

Project No.	Applicant.	Date advertised.	Date limiting receipt of objections.
105	Southern California Edison Co. (California).....	Dec. 20, 1920.....	Mar. 21, 1921.
120	do.....	do.....	Mar. 10, 1921.
6	Niagara County Irrigation & Water Supply Co., merged with Niagara Power & Development Co. (Readvertisement, New York.).....	Dec. 21, 1920.....	None fixed.
39	Millard F. Bowen (New York).....	Dec. 22, 1920.....	Mar. 10, 1921.
78	Western States Gas & Electric Co. (California).....	Dec. 23, 1920 ²	Mar. 16, 1921.
85	Southern California Edison Co. (California).....	Dec. 24, 1920.....	Mar. 14, 1921.
125	Southern Sierras Power Co. (California).....	Jan. 3, 1921.....	Mar. 21, 1921.

² This advertisement was recalled Dec. 27, 1920.

STATEMENT OF MR. MILLARD F. BOWEN, OF WASHINGTON, D. C.

MR. BOWEN. I want to first hand to each of you a map of the proposed St. Lawrence and all-American ship canals, in connection with which power will be generated; and the question arises whether under the act as it is the Federal Power Commission has jurisdiction to declare the all-American route for the ship canal a public highway of the United States. I ask that the written portions on the map be put in the record.

MR. SINNOTT. Has that any relation to the bills we are discussing?

MR. BOWEN. No; it is a request that the committee add an amendment, a committee amendment, that will designate specifically what jurisdiction, if any, the Power Commission would have.

MR. SINNOTT. Have you an amendment prepared?

MR. BOWEN. The amendment I would propose to exclude from the jurisdiction of the commission the Niagara River allowance of water by treaty with Canada.

MR. SINNOTT. Amendment like that would not be germane to this committee.

THE CHAIRMAN. I doubt very much if it would be germane. If it goes to the personnel and don't affect the provisions of the original power act affecting jurisdiction of projects I rather think your amendment on 15126 would be germane. You will notice that only deals with personnel, how it is to be paid, where taken from, and so on.

MR. BOWEN. I understood the committee could submit a committee amendment that would cover such a case. I have put up to the chairman of the Senate committee, Mr. Jones, this question, whether in enacting the Federal power act the Congress of the United States had in contemplation the delegation of power to the commission to declare such a route for a ship canal a public highway of the United States. Jurisdiction over the development proposed in the ship canal plan can only be had if that declaration can be made. I was told by Mr. Jones that it was not in contemplation of Congress that that power of Congress should be delegated to the commission. If that is true, then the consideration of this matter of the ship canal by the Federal Power Commission would be beyond their jurisdiction, and there are so many questions that join themselves together—the route from Lake Erie to Lake Ontario is so closely united in this application with the route from Ontario to the Hudson that they can not be divorced from each other, and I have been informed and notified

that on the 24th of January there would be a hearing before the commission of all the applications, 8 or 9 or 10 of them, referring to the diversion of the treaty water of the Niagara River. And furthermore, I have been notified, not in writing but by word, that at that hearing there will be no chance to put in a consideration of the ship canal plan as extended from Ontario to the Hudson, and that would be a separate question.

Well, now, it can not be; the best interests of the people are so interwoven in making a good job of the whole of the ship canal from Lake Erie to the Hudson River that to divorce the Mohawk Valley route from the Niagara route would not be for the best interest of the people, and with that end in view I have asked the committee to consider that there is great danger that all the treaty water that is allowed to be diverted from Niagara River will be, unless some action is taken by Congress, licensed and granted to other purposes than such a combination of purposes, including the ship canal, as this project covers.

It is a matter of grave importance and a matter that I think should receive the attention of Congress immediately, because soon after the hearings on the 24th of this month there will be a determined effort on the part of the Niagara Falls Power Co. to get its 50-year franchise established by license of the commission.

Mr. RAKER. The Federal Power Commission?

Mr. BOWEN. Yes, sir.

Mr. RAKER. What do you want?

Mr. BOWEN. To take the Niagara River out of the Federal Power Commission's jurisdiction.

Mr. RAKER. You are afraid they will act wrongly on it?

Mr. BOWEN. Only they have said to me already they are not going to consider its relation to the complete ship-canal plan at the time of this January 24 hearing.

Mr. SINNOTT. Whom do you mean by "they?" "They" said to you?

Mr. BOWEN. Mr. Merrill has said to me that the consideration of the Mohawk branch of the ship canal would not take place at the time the Niagara ship canal is to be heard on the 24th of January.

Mr. TAYLOR. Why don't you present this matter in a separate bill or some other formal way and bring it up before the committee here, either in the Senate or the House?

Mr. BOWEN. It was suggested to me by the chairman that I might be heard at this time and see what the committee would say in regard to it, and if that seems to be a better method I will see to it that a separate amendment will be introduced and considered, I hope, at the same time in connection with the amendments now before you.

Mr. RAKER. Aren't you protected under subdivision A of section 10 of the water-power act, that they must in this application adopt a comprehensive scheme of improvement and utilization for the purposes of navigation and water-power development and benefits of other public uses?

Mr. BOWEN. It would seem so, my dear sir, if the Congress has delegated to the commission the power to declare such a ship canal a navigable highway of the United States. The commission itself is undecided, as I have been told by their counsel, and the International Joint Commission also have doubts about the jurisdic-

tion of the commission. It is something that Congress should decide before the commission has the power to grant away all of the waters that are now under the jurisdiction for power purposes alone, if there were not such a plan before them for better use of the waters of the Niagara River, and the well-known power of the Niagara Falls Power Co. behind such an application for license——

Mr. RAKER (interposing). Suppose that upon the hearing it will be shown that there was a higher public use than navigation or water-power development? Anything that would be to the benefit of public uses could be shown, couldn't it?

Mr. BOWEN. It could be, but then it leaves the proposition to be settled whether the jurisdiction could extend to this. The route includes several portages, and in the case of the Fox and Wisconsin Rivers the Congress gave the right to a private corporation to cut through the portage between the heads of the Fox and Wisconsin Rivers. Only Congress could do that. If this Water Power Commission had been in existence at that time it would be Congress that had the jurisdiction at that time, I claim, and it would seem this Congress should take away from this commission the power to dispose of that Niagara water until Congress has enacted certain jurisdiction in the matter; and it is admitted by Senator Jones, without any hesitation, that Congress did not contemplate enacting in the law that such jurisdiction should be delegated to the Federal Power Commission; and I ask your serious consideration on that score, that there is a possibility of doing a great public work here that may be spoiled by this uncertainty, and that you can correct by taking back, if you have ever given anything away to the commission—take it back and enact a special bill covering this particular ship canal with all of the benefits that are greater uses than power.

And one very particular thing in regard to the ship canal: When the Senate last year was considering the matter of referring to the International Joint Commission the subject of investigation of the St. Lawrence route, every Senator, nine or ten of them, said if a route could be obtained through our own country that they would favor such a route; in accordance with that suggestion I went to work and added to my previous plan, which only included a route from Erie to Ontario, and have demonstrated that there is enough water power between Ontario and the Hudson, together with water power between Erie and Ontario, to pay for the ship canal without any appropriation and without any tolls. If a bill could be considered in this short session I should have introduced a bill, but being sure that there could not be any consideration practically paid to the bill I am waiting till next session; then the bill will provide for the full development of not only fifteen hundred thousand horsepower, but also the gift to the Government of a ship canal without tolls; and furthermore to the Government would also come a division of the net earnings. I only ask that you give it fair consideration, and if it is necessary to introduce a separate bill for this amendment, why, after you do consider it, I hope you will notify me that that will be necessary.

Mr. RAKER. I suggest that Mr. Bowen prepare his amendment and extend it in the record.

(The amendment proposed by Mr. Bowen is indicated in italics at the end of the following bill:)

[H. R. 14760, Sixty-sixth Congress, third session.]

A BILL To amend the Federal water power act approved June 11, 1920, so as to exclude therefrom national monuments and national parks.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the act of Congress entitled "An act to create a Federal Power Commission; to provide for the improvement of navigation; the development of water power; the use of the public lands in relation thereto; and to repeal section 18 of the river and harbor appropriation act, approved August 8, 1917, and for other purposes," approved June 10, 1920, is hereby amended so as to exclude from the provisions and operation of said act national monuments and national parks of the United States, and the navigable boundary waters of the United States.

(Further data submitted by Mr. Bowen is as follows:)

WATER ROUTE.

All-American ship canal, 30 feet deep. Route of ship canal follows barge canal from Lake Oneida to Rotterdam Junction. No tolls; no appropriations. Plan of Millard F. Bowen for Lakes to ocean canal.

We do not need to go to Canada for a ship canal route; the best route is as shown by the dark line on the map below.

The reasons are obvious:

First. Congestion at terminals in New York State will cease when ship canal is operated. Every point upon the banks will become a possible terminal station or manufacturing site. Power will be generated where needed most—in central New York.

Second. Fourteen hundred thousand horsepower from water will fill requirements without changing Canadian boundary treaty. Income from power alone will pay all the cost.

Third. The Government need not spend hundreds of millions, but will get part of net earnings of corporation, as well as the canal free of tolls and construction cost.

Fourth. After this shall have been accomplished, then aid Canada in building the St. Lawrence Canal, but insist that it be 30 feet deep.

Fifth. Twenty years ago Commissioners Angell, Russell, Cooley, Raymond, Noble, and Wisner, all good engineers and economists, recommended this all-American route practically as now offered free by us. Their report cost \$500,000.

Sixth. The traditional conservatism of Army engineers, that ignores income from power and other indirect sources, will be overcome.

Seventh. Lake freighters will pass back and forth so as to earn money all the year round. The United States will maintain control of navigation.

Eighth. It will be of great military value, as was demonstrated during the World War. Floods will be stored and flood waters used.

Ninth. Most of the markets of the world are nearer via this route and it has a longer season of navigation. Sailing time from Duluth to New York will be less than six days.

Tenth. We ask only a Federal charter, and that Congress declare the route a public highway without tolls.

These are hard facts, not sentiment. Americans must control their outlet to the sea. This is the most important engineering issue since the Panama Canal.

Dated, Washington, D. C., September 1, 1920.

MILLARD F. BOWEN AND ASSOCIATES.

Area of watersheds between Lake Ontario and Hudson River, 4,800 square miles.

Estimated run-off averages 2.2 cubic feet per second per square mile.

Federal charter to give Government jurisdiction and control over navigation of ship canal to be built by private enterprise. Waterpower to pay the cost.

Every stream to have storage reservoirs to retain sufficient water for navigation in the ship canal.

The barge canal for 100 miles to be deepened from 12 to 30 feet, but not to be closed to local State purposes.

At Lake Ontario, vessels to be raised 137 feet by one set of locks; from thence to the Hudson River all water to flow eastward.

High counterbalanced twin lift locks to be built at Little Falls, Mindenville, Amsterdam, Guilderland, and the Hudson River, instead of old style locks.

Hudson River is an arm of the sea 150 miles inland; it never completely freezes.

Senator Lodge said: "We ought to think long before we join with another country to make a waterway which we can not control. The people who control the mouth of a river control the river. If a waterway can be found through our own country, I think the canal should be built through that way. The route should be through American territory, which would give cheapness of transport to the products of the agricultural West, and yet at the same time keep it within our own boundaries. As long as a waterway is in our own territory there is no danger of any international discussion. One way of making our good relations with Canada as close as possible is to avoid subjects of disputes. We are taking some risk when we put control of a large portion of our most important commerce in the hands of another country." (Cong. Rec., p. 3845, Feb. 18, 1919.)

MILLER TO TEST LEGALITY WATER POWER RESTRAINT.

ALBANY, N. Y., *January 7*.—Gov. Miller has instructed Attorney General Newton to test the legality of the Esch Act giving control of State boundary waters to the Federal Government. This action was taken after a visit by Paul A. Schoelekoff, president of the Consolidated Niagara Falls Power Co.

The action of the governor brings forward the whole question of hydroelectric development of the State's resources and the policy to be pursued by the new administration.

The CHAIRMAN. There are some witnesses here who can not be heard and they will have the privilege of having their remarks printed in the record if presented within the next few days.

(Thereupon the committee adjourned.)

LETTERS SUBMITTED.

LETTER SUBMITTED BY MR. ALBERT L. SCOTT.

NEW YORK, N. Y., *January 7, 1921*.

HON. JOHN J. ESCH,
Chairman Committee on Water Power,
House of Representatives,

MY DEAR CONGRESSMAN ESCH: I was very much pleased yesterday while attending the sessions of your committee to note the careful and intelligent way in which you were going into the entire question of the relation of Congress to the development of water powers in the United States.

I had hoped for an opportunity during the afternoon to speak to the committee for a few moments to urge the necessity of setting up, under the Federal Power Commission, a staff of its own capable of handling the tremendous interests with which the commission has to deal.

My firm has been engaged in engineering work in this country for a great many years. Even before the Civil War my predecessors were building dams and hydraulic developments in New England and in the South, and our interest in hydraulic work has continued unabated to this day. Owing to the difficulties surrounding the establishment of a water power in the last decade, we have found it difficult to continue our water-power operations in any large way. With the formation of the Water Power Commission we felt that a great advance step had been taken in the way of developing the resources of the country. We hope that your commission in its wisdom will provide this Water Power Commission with a staff which will make it possible for it to function intelligently and promptly. In my opinion it can not do this if it is dependent on borrowing its personnel from other departments of the Government which, presumably, have plenty for their own people to do. You would not consider having the Interstate Commerce Commission conduct its affairs on a borrowed personnel. The Water Power Commission, in the same manner, needs its own highly specialized, highly trained, and experienced organization.

Owing to the difficulties surrounding the development of water powers, there has been a marked tendency in recent years for such developments to fall into the hands of a relatively small group of corporations, known colloquially as the "interests." With the formation of the Water Power Commission, especially if it be backed by an efficient working personnel, water-power developments will be made easier to achieve, and we, as a large independent engineering organization, are very anxious to have this commission get under way at the earliest possible moment. I therefore urge that you modify the terms of House bill 15126 to make it possible for the commission to engage its own personnel independently of any of the other departments of the Government.

Truly, yours,

LOCKWOOD, GREENE & Co., *Engineers*,
Per ALBERT L. SCOTT, *Chairman*.

LETTER SUBMITTED BY MR. M. O. LEIGHTON.

WASHINGTON, D. C., *January 7, 1921.*

Hon. JOHN J. ESCH,

Chairman Water Power Committee, House of Representatives.

MY DEAR MR. ESCH: I attended the hearing of the Water Power Committee on H. R. 15126 in the hope of being able to make a short statement on behalf of Engineering Council as to the provisions of lines 1 to 8, inclusive, of section 2, but was prevented from so doing by the length of the discussion on the subject of national parks. Permit me, therefore, to submit the following short statement:

The position of executive secretary of the Federal Power Commission is one of the most responsible in the executive departments. If you will examine a copy of orders of the commission numbered 1, 2, 3, and 5 (attached hereto), which prescribe the authority and duties of the executive secretary, you will note that he has been given, and almost of necessity must be given, responsibilities nearly equivalent to those of the commission. According to the wisdom or unwisdom of his acts great developments will be accelerated or retarded and water power investment will become attractive or unattractive. It is manifest to the council, on whose behalf this letter is written, that neither the Government nor its people nor the developer of water power can afford to place such responsibilities on a \$5,000 man.

We do not expect Government compensation for professional services to be on a parity with that which hard-headed business men have found it wise to pay for such services, but it seems as though we could at least expect the Government to pay one-half of the reasonable rate of compensation. The water power law and the orders of the commission describe a man who would be paid at least \$15,000 a year in similar private work. Engineering Council hopes that this provision of the bill making it possible to pay \$7,500 will speedily become a law.

There was a time when there were hundreds of men in the departmental service willing to work for a small part of that which they could earn in outside service merely because of their interest in Government work. That spirit is rapidly passing away, because the margin between the one and the other has become so wide. There are comparatively few such men remaining, but one of them is the present executive secretary of the Power Commission. Ordinary business prudence renders it advisable to hold that man where he is. He is only human, and it is inevitable that if the present rate of compensation be maintained he will follow the example of many hundred others and go where his services are adequately compensated. If this occurs, his successor will be a \$5,000 man, and it follows that he probably won't fill the bill.

Yours, very truly,

M. O. LEIGHTON,
National Service Representative, Engineering Council,
700 Tenth Street, Washington, D. C.

LETTER SUBMITTED BY MR. J. H. LEVERING.

WASHINGTON, D. C., *January 11, 1921.*

Hon. JOHN J. ESCH,

Chairman House Committee on Water Power.

SIR: Acting upon the permission granted by your committee, I submit this statement to be included in the transcript. My name is James H. Levering; my permanent residence is Los Angeles, Calif. I am temporarily residing at No. 1006 East Capitol Street.

I am a civil and hydraulic engineer and have been in the active practice of my profession for more than 30 years. I am professionally and personally interested in legislation pertaining to water power and hydraulic energy throughout the country. As an American citizen, I am interested in the welfare and prosperity of this great Government, and appear before this committee in that behalf.

I ask your careful consideration of H. R. 15126, and that it be amended at page 2, section 2, line 4, by substituting a period for the comma after the word "duties," and striking out the remainder of lines 4, 5, 6, 7, and 8.

The commission has testified that applications have been filed with them for the development of 12,000,000 horsepower hydraulic energy. A survey of this country shows that as much as 80,000,000 horsepower may yet be developed. The statement may well go unchallenged that the adoption of a defective plan of construction results not only in retardation of water-power development, but also renders useless a vast outlay of money, coupled with an indefinite delay of economic conservation, either of which would in the end prove an economic tragedy. There could be nothing so dangerous and unsatisfactory as to depend upon an incompetent person to approve or change plans of such magnitude.

The value of a hydroelectric plant, one that is well designed, lies in its ability to show an operating profit, otherwise it could not command financial support. So far as I have been able to ascertain, I am aware of no hydroelectric plant constructed by either the War, Interior, or Agricultural Departments, or any plans that were materially changed by Government engineers that can generate electric current for less than 6 mills per kilowatt hour, or has ever been built within an expenditure of \$300 per horsepower. In making this assertion I include the interest and amortization and cost of both the generating and hydraulic units.

Plants have been built without Government supervision that can produce power as low as 2 mills per kilowatt hour.

A slight change in the construction of the dam or the installation of the machinery or the transmission lines, or even in event an extraordinary system of bookkeeping might be installed under this act that would increase the producing cost more than 1 mill per kilowatt hour. When the present 12,000,000 horsepower are in operation the excess cost of 1 mill per kilowatt hour would amount to a total of \$12,000 per hour as a dead loss, or more than \$105,000,000 per annum. As a matter of fact I am quite sure that by the time a hydraulic plant has been through the routine of the present commission, and all the changes and additions required by them have been made, it will impose an encumbrance of over \$200,000,000 per annum on this great industry, and will be that much of an irreparable loss. When the total power developed in this country has been increased the loss would be increased proportionally.

To give you an example of the present inefficiency of the engineering officer of the commission I will quote an interview which appeared in the Washington Herald Friday, December 17, 1920, as follows:

"Doubt as to the feasibility of the plan of J. H. Levering, Los Angeles engineer, for harnessing Great Falls, was expressed yesterday by Lieut. Col. William Kelley, chief engineer of the Federal Power Commission, assigned from the Engineer Corps of the Army.

"Col. Kelley said he was not familiar with the Levering project, but understood it called for a specially constructed type of earth filled dam with almost vertical sides and a thin sheathing of steel and concrete to hold the earth in place.

"I do not know anything about Levering's engineering ability," said Kelley, "but if he is an engineer at all, he ought to know that this type of dam would not withstand the overtopping floods of the Potomac in the spring of the year."

"Any dam constructed across the Potomac, Col. Kelley said, must be built to withstand overtopping floods. When huge cakes of floating ice and big tree trunks come sweeping down the Potomac, he said, they would go over the top of the dam, but their weight would force them down on the lower side into contact with the wall of the dam, and it would quickly be ripped open and the dam would go out.

"Col. Kelley also took issue with the stability of the thin sheets of protecting steel and concrete with which Levering would encase the dam. If the sides of the dam were given a greater slant instead of being almost vertical, the colonel said, the steel walls would stand a better chance, but with the pressure of the water without and the earth within the walls would soon bulge out and break.

"Col. Kelley cited the case of a similar dam in the Yuba River in California, which went out with the first flood. He said the report of the Army engineers, now engaged in a survey of the project under the authorization of the Power Commission, probably would be in the hands of the commission some time next week. The commission then would draw up its recommendations and submit them to Congress with the engineers' report by the first of the year, as authorized by Congress."

This is the authorized statement of the present engineering officer of the Power Commission, a lieutenant colonel, Corps of Engineers, United States Army. He states he is not familiar with the plan that he is criticizing, but that does not seem to be an important factor in the case.

As to the failure of the Yuba Dam, the personnel of this select committee has been very properly chosen because of their familiarity with the subject in hand, and you can readily ascertain if a calamity as serious as that which would follow the failure of a dam similar to the one proposed for Great Falls ever occurred upon the Yuba River. The only dam that I recall having failed on that stream was one constructed under the authority of the Caminetti Act. Col. Kelley, in his criticisms of my proposed plan, likened it to the one cited by him, and as the engineering officer of the commission seeks by virtue of his authority to bind the commission and its findings and to prejudice their views against my plan by concluding that the same fate would befall the one built on the Potomac River if my plans (which he admits he is unfamiliar with) were followed.

Quoting from the above article, Col. Kelley states: "I do not know anything about Levering's engineering ability." As to this I certainly have the advantage of him, as his ability as an engineer is well established from the following statement: "If sides of the dam were given a greater slant instead of being almost vertical," the colonel said, "the steel walls would stand a better chance." "When huge cakes of floating ice and great tree trunks come sweeping down the Potomac," he said, "they would go over the top of the dam, but their weight would force them down on the lower side into contact with the wall of the dam and it would quickly be ripped open and the dam would go out."

Assuming the colonel to be familiar with exterior ballistics or the movement of a projected body through space, we have the novel conclusion of the commission's expert engineer advisor that such a moving body when sweeping over a perpendicular dam would quickly rip it open, and his remedy to prevent such a catastrophe is to give the face of the dam more slant, in order that all such bodies would strike the structure with all the force of their weight and motion. It is patent to any one that such a body being carried over a dam would come nearer clearing a perpendicular wall than if the face of the structure were given a greater slant.

Col. Kelley assumes that such a floating body sweeping over a perpendicular dam at sufficient velocity to rip open the steel wall, which would by calculation show as much resistance to an object moving almost vertically and parallel to it as would be developed by the armor plate of a battleship receiving the direct impact of a high-powered projectile of equal weight. It is evident that the current and momentum would sweep all such moving objects away from a perpendicular structure. In order to strike the face of the dam, it would not only have to reverse its motion, but pierce a heavy curtain of falling water before it could be impinged against the structure.

Should the retaining wall of this dam be given a greater slant, as suggested by the supervising engineer of the committee, we will say, for instance, at an angle of 45°, we would then have this immense wall of steel and concrete which, in the case of the lower dam would weigh more than 20,000 tons, resting upon the earth-fill embankment instead of standing upon its foundation. Should the material of the dam shrink away from this wall by settlement or drainage, it would leave it hanging by its fastenings from the walls of the canyon, and should it by any freak of luck remain in that position it would have the glory of the leaning Tower of Pisa totally eclipsed.

The absurdity of offering to this commission well-developed plans and meeting such criticism as those, without any investigation on the part of the critic, makes it very discouraging to attempt to get a sane and efficient set of plans adopted, or of making an investment secure. If the greatest industry of this country is to be placed under military control by the enactment of this bill, we may have many repetitions of Muscle Shoals projects rather than satisfactory water-power installations.

As the commission consists of the Secretaries of War, Interior, and Agriculture, and under H. R. 15126 it is hardly possible that the commission would deny the President the right to appoint the engineering officer from the Army. The only relief from this unfortunate situation is to trust the supervision of the plans to men who have had experience in this line of work. Nothing is more hazardous for money investment than an improperly constructed power plant, whose efficiency or use may be impaired or destroyed from improper construction. Such propositions must be made attractive to capital.

The highest water-power development has been attained in Scandinavia, where the Government encourages rather than handicaps all such undertakings, both as to earnings and a minimum of restrictions and regulations. Many millions of dollars have recently been expatriated to Italy, France, and throughout Scandinavia in the construction of hydroelectric plants. Canada is rapidly outstripping our own country

along this line; and we, as a people, may well look to our laurels if we expect to keep pace industrially with other countries.

Respectfully submitted.

J. H. LEVERING.
1006 East Capitol Street, Washington, D. C.

LETTER SUBMITTED BY THE SAN FRANCISCO CHAMBER OF COMMERCE.

SAN FRANCISCO, CALIF., December 9, 1920.

Hon. JULIUS KAHN,
House Office Building, Washington, D. C.

MY DEAR MR. KAHN: You have probably had brought to your attention the proposed bill for a modification of the Federal water power act, passed at the last session of Congress and approved June 10, 1920.

The suggested amendment has for its purpose eliminating the national parks and monuments from the provisions of the act, in order to preserve these national playgrounds from use for the creation of storage reservoirs and power plants. The agitation in behalf of this amendment was caused by the plans of certain irrigation projects for the storage of water in Yellowstone National Park.

This chamber of commerce has made a careful analysis of the act as it now exists and a study of the objections raised by the National Parks Association. As a result of this study the board of directors has adopted a policy in relation to the subject which we wish to commend to your favorable consideration and trust that you will be able to support our position in the Congress.

The chamber of commerce is opposed to any measure which would completely eliminate national parks and monuments from the authority of the Federal Power Commission. It would indorse, however, a measure which would prohibit the construction of any dam or reservoir or power house by a power company within the boundaries of any existing national park, and would support an amendment to the Federal water power act to this effect.

The chamber believes, however, that authority should remain with the commission to grant licenses for reservoirs and power plants in any national park which may hereafter be created, or in any extension of existing national parks, and that the commission should retain power to grant licenses for transmission lines across any national park.

It is probable that in the future it may be desired to create additional national parks and extend the boundaries of existing national parks to many of the mountainous sections of the Western States, and the need for development of hydroelectric power to meet growing requirements of these States demands that some competent authority should have power to grant licenses outside of the present national-park areas. We can conceive of no safer tribunal for this purpose than the three Cabinet officers heading the Departments of War, Agriculture, and Interior, within whose jurisdiction the various reservations come.

Should the authority of this commission to grant licenses be withdrawn from any extensions of existing parks or new parks, the fact that the commission would thereby be deprived of authority to determine the question of licenses for power development would render much more difficult the task of securing support for the new reservation from communities depending upon the hydroelectric development within the suggested territory.

Under the act the commission may grant a 50-year license to a power company for the development of a project in a forest reserve, and it may be necessary to such project that its transmission line should cross a national park and we, therefore, believe that no modification of the act should be permitted that would take from the commission its authority to grant a license to such project to construct such transmission line across a national park.

The parks are amply protected under the law in the construction of such transmission line by the provision that applicants for licenses must file with the commission maps, plans, and specifications and estimates of cost, and that these maps, plans, and specifications must be approved by the commission—one member of which is the Secretary of the Interior—and that in order to secure such approval the power company would be required to construct its lines in such manner and over such portions of the park as would not be a detriment to the purposes for which the park was created; and further the license is subject to such conditions as the Secretary of the Department of the Interior deems necessary to the adequate protection and utilization of the park.

If this authority is denied the Federal Power Commission, permission to construct a transmission line across a national park must be secured from the Department of the Interior and under rulings of that department such permit would if granted be revokable after one year. This feature would of course jeopardize the entire project and render financing impossible.

We sincerely trust that you can support the position of the chamber of commerce as above outlined, and we shall appreciate any information which you may be able to furnish us in relation to this entire matter.

With kindest personal regards, I am, very sincerely yours,

GEO. C. BOARDMAN,
Vice President San Francisco Chamber of Commerce.

LETTER SUBMITTED BY MISS HARLEAN JAMES.

WASHINGTON, D. C., January 8, 1921.

HON. JOHN J. ESCH,
*Chairman Select Committee on Water Power,
House of Representatives.*

DEAR MR. ESCH: In accordance with permission granted us to submit further resolutions concerning the bills considered at the hearing before the Select Committee on Water Power on January 8, I have the honor to submit statement of T. Gilbert Pearson, president of the National Association of Audubon Societies, statement of Robert Sterling Yard, executive secretary of the National Parks Association, and statement of Harris A. Reynolds, representing the conference for the protection of the national parks and monuments and the Massachusetts Forestry Association.

In addition may I repeat what I think is already clear from the testimony offered before the committee, that the American Civic Association favors both Esch amendments to the water power act (H. R. 14469 and H. R. 15126). We believe, with you, that the national parks and monuments will be safeguarded by H. R. 14469, as submitted, first, because of the principle which will be established by the passage of the bill and, second, because of the publicity and time needed to secure an act of Congress which would authorize grants of the peoples' rights in their property. Local hearings before an executive commission would seldom be advertised sufficiently to notify the people at large of proposed alienations of their rights in national parks and monuments.

Thanking you for the courtesy extended to us at the hearing, I remain,

Very truly, yours.

HARLEAN JAMES,
Secretary American Civic Association.

LETTER SUBMITTED BY MR. T. GILBERT PEARSON.

NEW YORK, N. Y., January 6, 1921.

HON. JOHN J. ESCH,
*Chairman Select Committee on Water Power,
House of Representatives, Washington, D. C.*

DEAR SIR: The organization which I represent, with its branches and affiliated societies, numbers in the neighborhood of 1,000,000 of our best people in this country. Permit me to state that this association is unalterably opposed to any change in the national policy which has hitherto held our national parks inviolate. We are opposed to the bill sponsored by Representative Smith of Idaho to construct a reservoir for commercial purposes in the southwestern corner of Yellowstone Park, and believe that the Senate gave favorable consideration to this matter only because of a misunderstanding as to the character of the territory involved. We are also opposed to the bill now pending in the Senate which has for the purpose the damming of the Yellowstone River with the intention of storing water for irrigation in Montana.

In reference to bill H. R. 14469, intended to amend the water-power bill by striking out the words "national parks and monuments," permit me to say that we greatly favor this and hope it will become a law.

I wish, in conclusion, to voice my strong opposition to the amendment here to-day proposed by Mr. Pierce, made for the purpose of exempting national parks which may be created in the future from provisions of this bill.

T. GILBERT PEARSON,
President National Association of Audubon Societies, New York City.

LETTER SUBMITTED BY MR. ROBERT STERLING YARD.

Hon. JOHN J. ESCH,
*Chairman Select Committee on Water Power,
 House of Representatives, Washington, D. C.*

DEAR SIR: I only learned of this hearing after dinner last night, or I could have brought you the telegraphed evidence that I also represent other organizations besides my own whose combined memberships reach several millions of voters.

In behalf of our earnest allies, the General Federation of Women's Clubs, I present the resolutions passed by its board of directors on September 16 last, and state, of my personal knowledge, that the federation, which numbers about 9,000 clubs and 2,500,000 members, is active to its fingers tips in defense of the national parks conservation. They appear at the close of this statement.

In evidence that the scientific men of the Nation are alarmed at the threatened destruction of the untouched native quality of the national parks, which constitutes their value to science. I offer you resolutions passed a few days ago by the American Association for the Advancement of Science, and by the Ecological Society of America at their recent conventions in Chicago. As you know, the American Association for the Advancement of Science is the most distinguished and inclusive association of scientists in America. It has 14,000 members.

As an example of the attitude of those many universities and colleges throughout the land who have expressed themselves upon the present situation, I append resolutions passed by Yale University.

The association which I represent, and hundreds of allied organizations from Maine to Texas, from Florida to Washington, whose earnest purposes I personally and fully know request Congress to pass H. R. 14760 and thereby return the national parks and monuments to the sole authority of Congress.

Let them quarrel with me for not joining them in the request, I must name, out of the many, at least these few earnest organizations:

The American Forestry Association; the American Automobile Association; the American Federation of Art; the General Federation of Women's Clubs; the National Federation of Business and Professional Women; the League of American Penwomen; the American Bison Society; the American Game Protective and Propagation Association; the American Scenic and Historic Preservation Society; the Mountaineers, Seattle, Wash.; the Natural Parks Association, Seattle, Wash.; the Sage Brush and Pine Club, Yakima, Wash.; the California Alpine Club, San Francisco, Calif.; the Sierra Club, San Francisco, Calif.; the Colorado Mountain Club, Denver, Colo.; the Nature Study Club of Indiana, Indianapolis, Ind.; the Field Museum of Chicago Chicago, Ill.; the Camp Fire Club, Chicago, Ill.; the Prairie Club, Chicago, Ill.; the Geographic Society of Philadelphia, Philadelphia, Pa.; the American Museum of Natural History, New York; the Camp Fire Club of America, New York City; the Boone and Crockett Club, New York City.

Representatives of important organizations in New England, New York, and elsewhere are present here, in person, notwithstanding the short notice.

We believe that the doctrine of the complete conservation of the national parks and monuments constitutes a fundamental policy upon which no authority short of Congress is entitled to pass.

We believe that to depute the power to grant any commercial use of these reservations is a congressional reversal of this half-century-old policy which Congress at the last, excessively busy, session passed in the water power bill through sheer inadvertence; and that it is the duty of the same Congress at the present session to repair this manifest error by restoring the national parks and monuments to their former status.

We believe that continuance of national parks and monuments under the authority of any commission having the power to grant commercial leases amounts to a standing invitation by Congress itself to come in and commercialize the parks, a position certainly never contemplated by Congress at its last session.

The unique distinction of American national parks as examples of primitive nature is more highly appreciated abroad, where there are and can be no such examples than at home, but our own people are now learning their real significance with great rapidity. The national parks have taken a wonderful hold on the imagination of the people West as well as East. I allege with confidence, from my personal experience in spreading the news of the national parks' danger, that western people (I mean people in the Rockies and west of them) are responding, in full proportion to population as freely and as enthusiastically as eastern people.

Also, the evidence is growing week by week that national parks States in the West are generally beginning to perceive, as some Western States already have perceived,

that national parks, completely conserved, can be made to pay greater dollars-and-cents returns to the State than their waters could in irrigation and power.

I quote the Montana Record Herald, in its editorials of November 2 and 16, and the Denver Times, of December 30, as evidence, and will be pleased to send clippings to any who desire to see them.

I am convinced that, if you will hold our national parks safe from commercial invasion for five years more, as the times are moving, we defenders in the east will all be out of business. The West herself will be her own most valiant defender of the integrity of her national parks, and not for reason of sentiment, but because they pay. Give the parks a chance. Their fruition time has only now arrived.

Again, and emphatically, the National Parks Association wishes to go on record as strongly opposed to the suggestion made here to-day that this bill of amendment (H. R. 14760) be qualified by restoring to the authority of Congress only the national parks and monuments as at present constituted.

To do this inevitably will create, at some future time, two classes of national park—the older ones exempt from water power, except, of course, at the discretion of Congress, and new parks open to water power at the discretion of the Water Power Commission.

I record our earnest protest. If certain areas in proposed new parks are more valuable to the commercial development of this nation than to the national parks system, by all means let us not include them in new national parks at all. We all want to develop America. Let us cut such areas out of the bills for new parks before offering these bills to Congress.

The National Parks Association stands for the complete conservation of all national parks, even at the expense, if it should unhappily become necessary, of any enlargement of the system.

RESOLUTIONS.

These are merely examples of hundreds of resolutions from organizations of many kinds, which are reaching us continually from every part of the country. There are also scores of petitions.

RESOLUTIONS PASSED BY BOARD OF DIRECTORS OF GENERAL FEDERATION OF WOMEN'S CLUBS, SEPTEMBER 16, 1920, WASHINGTON, D. C.

Resolved, That the General Federation of Women's Clubs heartily indorses the congressional policy of the last 48 years for preserving our national parks in a state of absolute nature.

That it considers our national parks invaluable national museums of nature which it is the Nation's duty to hold untouched for the study and enjoyment of posterity.

That it protests against the inclusion of national parks and monuments in the provisions of the Federal water power act of June, 1920, and requests Congress to amend that act so as to exclude these reservations from its authority.

That it protests earnestly against the granting of any irrigation or other privilege in the Yellowstone or any other national park except those customary and necessary for the comfort and convenience of visitors.

That it authorizes the president of the general federation to take such action as she deems necessary to carry out the spirit and purpose of these resolutions.

RESOLUTIONS BY THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Whereas in recognition of the unique character and value of our national parks and monuments to present and future generations, 24 successive Congresses have wisely resisted attempts to commercialize them and have preserved them inviolate for nearly half a century,

Whereas certain private interests are now seeking to secure special privileges in these areas, which if granted will seriously interfere with their true purpose and undoubtedly result in the entire commercialization of these unique national museums: Therefore, be it

Resolved, That the American Association for the Advancement of Science request Members of Congress first to amend the water power act so that it shall not apply to national parks and monuments, and that their full control be restored to Congress; and second, to reject all present and future measures which propose to surrender any part of these national parks and monuments to private control or to divert them in any way from their original and exclusive purpose, the preservation for all future generations of unique representations of natural conditions such as exist in no other part of the world.

RESOLUTIONS BY THE ECOLOGICAL SOCIETY OF AMERICA.

Whereas the United States Congress for nearly half a century has loyally and devotedly protected the national parks and monuments from encroachments by private interests, and

Whereas a provision in the recently enacted water power bill would remove the national parks and monuments from the control of Congress; Therefore, be it

Resolved, That the Ecological Society of America approve the measure now pending to remove these from the control of the Federal Commission and return them to the control of Congress: And be it further

Resolved, That this society urges upon Members of Congress the rejection of all measures and especially the Falls River Basin bill (H. R. 12466), and the Yellowstone Lake Dam measure (S. 4529), and any and all other bills of similar purpose, providing for any encroachments whatever upon the national parks and monuments or limiting anywhere their complete and unmodified preservation for the use of the whole people in this and future generations: Be it further

Resolved, That a copy of this resolution be sent to the Speaker of the House and the President of the Senate, and also to the members of the appropriate committees, urging them to protect the national parks and monuments against all encroachments by private interests.

RESOLUTION BY THE COUNCIL OF YALE UNIVERSITY.

Resolved, That the Council of Yale University joins with the Connecticut Forestry Association in favoring proper amendment of the water power act exempting from its provisions the national parks and monuments which are now open to entry for water power development on the same terms as the national forests and other public lands; and in favoring further amendments which will prohibit other commercial uses of the national parks, as grazing and mining.

Yours, very truly,

ROBERT STERLING YARD,
Executive Secretary of the National Parks Association.

LETTER SUBMITTED BY MR. HARRIS A. REYNOLDS.

Hon. JOHN J. ESCH,
*Chairman Select Committee on Water Power,
House of Representatives, Washington, D. C.*

DEAR SIR: The people of New England are greatly aroused on this matter of protecting the national parks and monuments from commercialization. A large number of the leading public spirited organizations in New England have organized themselves into a conference for the special purpose of opposing measures which would in any way open the national parks to commercialization.

The conference strongly is in favor of H. R. 14760, believing that the people are nearer to the control of the parks in Congress than in the Water Power Commission.

Not only do we wish to push the amendment to the water-power act, but, since the Smith bill has been discussed to-day, we wish to register our unalterable opposition to any dams within the national parks. That these are absolutely incompatible with scenic conservation is very thoroughly demonstrated by the mud flats around Jackson Lake south of the Yellowstone National Park. It is all camouflage for the promoters of schemes for building dams in the national parks, where the water will be drawn off during the tourist season, to say that such a lake would beautify the park. It is an impossibility to have a beautiful lake with a mud border.

The only possible way in which the commercial interests and the park interests can meet on common ground, many of us believe, is to have Congress create some form of commission which will have power to determine the boundary lines of the parks, which will make it possible to exclude areas from the parks which are evidently better suited for commercialism than for recreation and to include any other areas better suited for recreation than for commercialism.

When the parks were established, most of them were lined out in rectangular lines with little regard for the topography or for the quality of the lands that were being included. And as the surrounding country becomes more populated the need for

the use of the natural resources of the parks has become greater and greater. But until we can establish the lines beyond which no commercial interest can go, the only safe position is "hands off the national parks," and, so far as the people of New England are concerned, that will be the policy until sufficient evidence is produced to show that the best interests of the country as a whole can be served by letting down the bars. We are firmly convinced that that time will never come.

HARRIS A. REYNOLDS,
*Representing the New England Conference for the Protection of the National
 Parks and Monuments and the Massachusetts Forestry Association.*

LETTER SUBMITTED BY MR. JOHN J. HARRIS.

WASHINGTON, D. C., January 10, 1921.

Hon. JOHN J. ESCH,
*Chairman Committee on Interstate and Foreign Commerce,
 House of Representatives.*

MY DEAR MR. ESCH: I was present the other day at the hearings before your committee on the subject of amending certain provisions of the power bill. I desired to be heard before the committee at that time, but it could not be so arranged.

I beg now to present herewith a copy of the Water Power Bulletin, issued by the Water Power League of America, for the month of November, 1920. Your attention is called to the article on pages 3 and 4 of the publication. I am also submitting a pamphlet issued by the Yellowstone Irrigation Association, of Livingston, Mont., for the month of November, 1920, with relation to storage of flood waters, etc.

As both of these articles have a vital bearing on the subject under consideration, I am asking that they be printed and made a part of the record of the hearings.

Respectfully submitted.

JOHN J. HARRIS,
President Big Horn Canyon Irrigation & Power Co., of Hardin, Mont.

(The articles referred to by Mr. Harris are as follows:)

FINANCING WATER POWERS WITH FEDERAL ASSISTANCE.

[By John J. Harris, president of the Big Horn Canyon Irrigation & Power Co.; Hardin, Mont.]

If we are to have only 15,000,000 of our 100,000,000 water horsepower put on the road to construction within the next five years, \$2,250,000,000 must be made available. This will average approximately \$150 per horsepower, construction cost. Even the most optimistic do not expect this amount to be raised by private agency. There must be another means available, if we are to have only partial development. Where is this money to come from? There is only one answer to this question, and that is, from the National Government. Since the waterways with which it deals are interstate, the question must be approached from that viewpoint.

Recently, the Water Power League of America held a convention at Washington, D. C., and requested expressions on the financing of power projects under the new law. Hon. Secretary Payne, of Department of the Interior, made the only response on this subject which offered any hope, when he obligingly indicated "that a power license secured from the Government would help finance." This is quite true, yet the legal restrictions of the license will also deter capital from going into the water-power business as long as there remains other business in the land free from such restrictions, to which investors may be attracted.

Not much of restriction or of license is imposed on the automobile business, yet it is among the largest and the most remunerative in the land, and meets with satisfaction on the part of both the Government and the people. Possibly, if such business carried a restrictive license conducive to the employment of high-salaried and technical legal help, to observe the legal restrictions (as is required in the income tax law), the automobile business would not be so great and remunerative.

Even to-day one may venture into the business of mining coal without any legal restrictions, yet water power must find its greatest market in competition with coal and oil. Our national hope and aim is that our wasteful and destructive flood waters may be harnessed to in a large degree take the place of both; yet by law we have placed the restrictions on the wrong foot—we have placed them not upon the coal

which by use is consumed, but upon water, the substitute for coal, which without being used will continue not only to run to waste, but to work destruction.

When we reflect upon the importance of this waste water and the countless purposes that it can be made to serve, and the vital bearing which water-power development has upon our national well-being, we wonder why there was not written into the law for each word of restriction a word of financial encouragement. The answer is simple: It was due to lack of understanding of the art on the part of many of our statesmen at the time.

The question of power development ranges from that of controlling the raindrop, from its source to tidewater and beyond to development of power and for almost every conceivable purpose. Chief among these are:

The storing of flood waters at their source and elsewhere, to boost the maximum power development at low-water stage.

The irrigation of arid and semiarid lands, of which Montana alone has 1,000,000 acres available.

The reduction of sediment flow in the rivers caused by reduction of the floods themselves and incidentally reducing dredging, dike, and levee work.

The regulation of stream flow throughout the year and incidentally aiding inland navigation.

The electrification of steam railways and the great reduction of cost in operation, greatly increasing the efficiency of the railroads without increasing the cost.

The saving of millions of tons of coal and millions of gallons of oil annually.

The manufacture of nitrates for fertilizer and for explosives, by hydroelectric process, for commercial and national defense purposes.

The saving of farm lands that are constantly being cut away by flood waters.

The reduction of ice gorge troubles.

The treatment of ores electrically which otherwise could not be made commercially workable.

The economic manufacture of paper.

The creating by irrigation of farm lands for the coal miner and others who might wish to engage in agriculture.

In support of some of the above points I make the following, merely for illustration (and there are many projects of a similar nature in the United States), to wit:

Our company has planned a water power and irrigation project in the mouth of Big Horn Canyon, near Hardin, Mont. The plan calls for a dam 480 feet high, which will create a reservoir 57 miles in length to store flood water for irrigating 100,000 acres of land and develop (on a load factor of 50 per cent) over 200,000 horsepower. The power will be used for the operation of 1,500 miles of transcontinental steam railroads which can be reached over a transmission distance not exceeding 200 miles from the power house. The project will cost \$25,000,000. The dam and reservoir will store 40,000,000,000 cubic feet of water, of which volume 30,000,000,000 cubic feet will be flood water stored, to increase the low flow of the river from 1,200 cubic second-feet to 4,000 cubic second-feet. By the same operation flood water will be reduced from 45,000 second-feet to 8,000 second-feet, the flow averaging throughout the year from 4,000 second-feet to 8,000 second-feet. Incidentally, this operation will act to give us complete control of flood water over a drainage area of 21,000 square miles, or 6 per cent of all the water which empties into the Mississippi River from its western drainage area or that which passes a line on the west bank of the Mississippi River from Canada to the Gulf of Mexico. By this one power project there will be taken from the Big Horn, Yellowstone, Missouri, and Mississippi Rivers annually a volume of flood water 5 miles wide, 5 feet deep, and 60 miles long. Again, by this same operation, it will be observed to what extent the flow of the above-named rivers will be regulated for increased navigation, and last, but not least, what the regularity of flow will mean by way of preventing sediment flow, for it is only at high water or flood stage that river banks are cut away and carried off as sediment, to repose in the bottom of the sluggish flowing streams, such as the Missouri and the Mississippi Rivers, and there it remains to reduce the size of the channels, or until it is removed by dredges. As an alternative, the river banks are raised by dikes and levees such as are located at New Orleans, where the city lies 40 feet below the river level.

The State and National Governments have already spent \$180,000,000 in this kind of work without having contributed 1 cent in effort to prevent flood water or sediment flow at its source, and this situation is as bad to-day as it ever has been in the past. Does it not seem that the National Government should, in its own interest, give water power developers a better opportunity than one hedged about entirely by restrictive laws?

Approximately 30,000,000,000 cubic feet of flood water will be stored in Yellowstone Lake for irrigation purposes only, if the Government will permit the plans of that project to be carried out.

Again, it has been recorded that by water power electrification the Chicago, Milwaukee & St. Paul Railroad operating from Harlowton, Mont., to a point near the Pacific coast, last year netted a saving of 300,000 tons of coal and 40,000,000 gallons of oil. Would it not be to our national interest to encourage power development so that more roads may be electrified and more flood waters be converted to use?

It has often been said that the railroads would find the money to build water powers with which to electrify when the need grew urgent. In the past nine years I have come in contact with many of the heads of the various railway systems and with others concerned in the financing of roads. They all take the position that it would have been to their interests to have electrified as far back as 10 years ago, if money had been available. They will tell you now that money is not to be had for this purpose, regardless of its merits.

Should you suggest to the banker and the financier (who to-day has no money for power development) that the money in part should be made available by the Government, they will tell you that while they do not have the money to invest they would not advise legislation making Government money available, for the reason that with it would follow governmental restrictions such as have come with the Federal farm loan act. Such restrictions would operate against all the good which might otherwise be obtained from the act.

Personally, I am unalterably opposed to the proposition of Government aid, in the sense that it would carry with it a control and dictation over and above that which is ordinarily extended to the private bond purchaser, but I am in favor of an amendment to the power bill which will permit the Government to invest in the bonds of a promising water-power development to the extent of 50 per cent of their cost, conditioned that the other 50 per cent is made available from private or other sources, and this only when assured by competent authority that a project is feasible and practicable from every viewpoint. Such amendment should, of course, carry with it an "optional clause" leaving it discretionary with the power developer to use or not to use such moneys.

This proposition is submitted for several very good reasons, to wit:

1. That nine years of experience (gained in advancing but a single meritorious project) has proven to me, beyond question, that Federal aid must and should be extended if water powers are to be built, since other money is not available. Eminent bankers and water-power financiers have repeatedly assured me in the past "that if water-power legislation was had, the money to build our project would be available." After the legislation was had I was advised to retire, as no money was expected for some time for any project. There is no authority in the United States to-day to advise where money can be obtained for power development, regardless of the market, or the promise of a market for the power.

2. There is the very best authority in the land available to assure a demand for hundreds of millions of dollars of power annually, if the same was to be had.

3. Large water powers require years to build. Therefore it is necessary to start building years in advance of the time when it is expected to have them completed for use. In this respect, they occupy the same position as the railroads have held in the building up of the country. The roads had to come first.

4. By reason of the national importance of water power and its kindred developments it would be good business for the Government to enact legislation extending financial aid for such, without adding much, if anything, to the taxes. It might well apply the annual "rivers and harbors appropriations" for this purpose for a time, at least, or until its power bonds would begin to bring returns. It might go easy with its "United States Reclamation Service appropriations," as there would be many private irrigation projects connected with power developments that would be built to in a large measure take the place of projects delayed by lack of United States Reclamation Service funds. There are numerous other appropriations that might be dispensed with, and the money appropriated for investment by the Government in this greater and more urgent field of national activity, and where the return of the principal with interest would be assured beyond question, which is not the case with most appropriations. Most of them are made to be expended and to remain expended; for instance, such as money spent in the building of dikes, levees, and dredging streams, and these offer only temporary relief after all.

5. Why not effect an appropriation amendment that at once makes for a secure investment in the building of permanent water power and irrigation works? Such

would develop cheap power, for which there is to-day a demand even greater than are the losses from floods, due to lack of these developments.

Why not in this manner encourage to the utmost the reclamation by irrigation of millions of acres of land attendant with power development, and by this single operation secure for the Nation the countless other benefits which limited vision and space will not permit me to dwell upon?

Why not, in a few words, adopt the policy "That an ounce of prevention is worth a pound of cure," and thereby create a national asset a hundredfold greater than the investment? From an economic standpoint such a policy would surpass anything which has yet been attempted. Let private initiative, with Government encouragement, have full sway in the building of that which means more to the Government by far than it means to any set of individuals.

THE LAKE YELLOWSTONE PROJECT.

[By the Yellowstone Irrigation Association, Livingston, Mont.]

Reams of adverse publicity have been circulated against the proposed project for the construction of a dam at the outlet of Lake Yellowstone in the National park. Perhaps 90 per cent of this criticism has been advanced by persons or organizations who have no real conception of the scheme. They do not know what the project really contemplates, why it is necessary, or what the effect will be after it is constructed.

In the interest of a full, fair, and thorough understanding of the matter this article is prepared. No statement is herein made that can not be amply supported by engineering data, and no conclusions are drawn except they are so fully warranted by existing conditions to admit of no argument.

Two hundred million dollars lost in Montana.—The money loss to the people of Montana due to climatic conditions during the past four years has been well over \$200,000,000. This gigantic sum is the difference between what was received for crops and what would have been received had the rainfall in the growing season been sufficient to produce just an average crop plus the sum that was sent out of the State for stock feed last winter. It is more than \$300 each for every man, woman, and child in the State. Probably no other State in the Union could stand such a drain on top of the drain for liberty bond, war relief, and excessive live stock losses suffered in 1919 and 1920 and survive a general and wholesale bankruptcy.

Reclamation to insure future.—Thoughtful persons everywhere, realize that if this condition is to be obviated in the future, if Montana is to come back into its own, and be a really great State, the change must be worked through a great extension of the area under irrigation. Reclamation on a grand scale is the only insurance against another disastrous drought.

The Yellowstone River.—The Yellowstone River drains Lake Yellowstone in the Yellowstone National Park and fairly tumbles down through a rugged canyon in the park and out into a valley in Montana. For 470 miles it then flows through Montana and just over the line into North Dakota where it joins the Missouri on another 1,700-mile journey by way of St. Louis and the Mississippi to the Gulf of Mexico.

Valley and benches.—The valley of the Yellowstone, from 1 to 10 miles wide, is one of the most fertile, and under irrigation one of the most productive areas in the northwest. On either side it is flanked by expansive benches. These benches extend back from the river as far as 40 miles and are even more fertile and under irrigation more productive than the valley itself.

Tributaries.—The river after it leaves the lake is fed by a number of important tributaries. Two of these, the Lamar and the Gardiner, join it while still in Yellowstone Park. The Shields, Boulder, Stillwater, Clarks Fork, Big Horn, Powder, and Tongue Rivers, together with dozens of lesser tributaries, affect a confluence and add to its volume on the journey down through Montana. These tributary streams like the Yellowstone rise in high mountain ranges, emerge from rugged canyons, and flow for many miles each through valleys bordered by bench lands before they reach the parent river.

Irrigated acreage.—In the main Yellowstone valley and on the bench lands bordering it, there is now under irrigation by canals diverted from the river something over 250,000 acres. This includes land to be served by canals now under construction. About an equal area has been reclaimed along the various tributaries by canals taken from them.

Irrigable acreage.—There still remains more than 1,000,000 acres of fertile land that could yet be put under water by gravity canals or pumping plants from the river, provided there was a sufficient volume of flow during irrigation season to serve such a demand.

Water shortage.—There is not during the irrigation season sufficient water to supply this need nor any considerable part of it. Indeed, in seasons where the flow is below normal there is not a sufficient volume of water to care for the land already under irrigation. In 1919, for instance, the river was at a minimum of flowage. Between Columbus and Forsyth 23 irrigation systems tap the river. For only 2 out of the 23 was there a full water supply throughout the season. Several canals received no water at all during the latter part of July and all of August. According to records kept by Mr. B. C. Lillis, a civil engineer, residing at Billings, the total crop loss because of this water shortage under the 23 projects was about \$4,000,000.

To be sure there was some water passing the head gates of all these canals. It could not be diverted into the canals because the floors of the various head works were in all cases somewhat above the bed of the stream. Had it been possible to divert all of the water needed, the river would have been bone dry at Miles City. In that event the great Lower Yellowstone project constructed to reclaim nearly 60,000 acres in the Lower Yellowstone Valley of Montana and North Dakota would have been without water, because the tributaries joining the river below Forsyth contributed little or no water during the latter part of July, all of August, and a part of September. Solely because 21 projects between Columbus and Forsyth had little or no supply, there was water enough passed down the channel to serve the 30,000 acres actually under irrigation on the Lower Yellowstone project and still permit a limited quantity to pass its head works and flow into the Missouri.

Shortage will recur.—Of course, these periods of water shortage and severe crop loss will recur again and again. They may be expected to recur with greater frequency and increased severity in the future because the area under irrigation along the river is being constantly increased with a proportionately heavier demand for water. This is even more true of the tributaries. The time must soon come when these tributaries will contribute little or no water during irrigation season. With possibly one or two exceptions there is sufficient irrigable land in their own valleys, when fully developed, to use all the flow, including such flood water as can be conserved by reservoirs. The Yellowstone must more and more depend on its main source of the supply, Yellowstone Lake.

Floods.—The volume of flow in the Yellowstone River is 26 times as much during the flood period in the spring as it is during the irrigation season in the late summer. During May and the early part of June the snows that have accumulated through the winter months in the mountain canyons surrounding the source of the stream and its tributaries are rapidly melting and running off. The river becomes a veritable torrent. This enormous volume of water runs to waste. Not only is there a waste of water and energy, but the raging torrent does a damage that runs into the hundreds of thousands, even millions of dollars.

Crops are flooded, farm land is eroded, roads, bridges, and buildings are washed away, railroad embankments are cut through, and towns are inundated. There is not infrequently loss of life. These floods have taken such a toll, at some one or more points along the 500 miles length of the valley, almost every year since settlement came in forty-odd years ago. A careful compilation of the damage done in 1918, in which season the flood was unusually large, puts the total figures at more than \$2,000,000. This is not guesswork, but an actual inventory of damage done. No complete record of the loss in any other season is available. Conservative men are of the opinion that in 10 years it has been nearly or quite \$5,000,000. A flood loss that averages half a million dollars per year is a direct tax of \$5 per annum for each of the 100,000 persons who make their homes along the Yellowstone.

Problem easily solved.—From an engineering and construction standpoint it is a comparatively simple matter to solve the problem of floods in spring and water shortage in summer. A simple concrete dam, that will cost less than half a million dollars, will hold back the floods and prevent an average annual damage equal to its total cost. It will hold in reserve sufficient precious water to make good every water right along the river, and prevent another \$1,000,000 crop loss on the irrigated land. It will store sufficient additional water to make possible the reclamation of 600,000 additional arid but fertile acres.

Millions a year or nothing.—The average value of crop production under the Huntley project, which is perhaps a fair sample of irrigated land in Montana, was \$39 in 1918 and \$49 in 1919. Add the items together, flood damage saved—present irrigated crops made secure—and crop values on land that may be reclaimed. Twenty-five

or thirty million dollars a year added to the economic wealth of the State and Nation. Of course, all this can not be realized at once even by the construction of the dam. It may be 25 or even 50 years before the last of all the various canals which must be constructed from the river to irrigate all the separate tracts that go to make up the 600,000 acres have been completed. The point is, that by natural development and in time, all the land will be reclaimed if water is provided. It can neither be reclaimed nor made of value without such a water supply. Twenty-five million dollars a year can be added to our wealth if the dam is built. Nothing can be added through an extension of reclamation in the particular area of reclamation unless it is:

The dam site.—There are two possible dam sites. Refusal of permission to make surveys in the park has precluded the engineers of the association from learning which site is the better of the two. One of these is but a few hundred feet below where the river leaves the lake and very near the present "Fishing Bridge." If constructed here the dam will be about 525 feet long and 20 to 25 feet in height above the bed of the stream. (The dam height is an unknown quantity since the depth of the stream at dam site, and the fall of the river from the lake to the site can only be determined by surveys.) The other site, about $2\frac{1}{2}$ miles farther down the river, will require a dam about 300 feet long and some 5 feet higher than the "Fishing Bridge" side. This extra height is to take up the fall in the river for the $2\frac{1}{2}$ miles.

At the upper site there is an unknown depth of sand, so that the dam may have to go a considerable distance below the stream bed for a suitable foundation or it may even have to be erected over a pile foundation. At the lower site the river bed is apparently solid bedrock.

Dam and bridge.—Which ever location is to be used the dam will necessarily be an artistic concrete structure in harmony with the surroundings. It will be provided with control gates, by means of which the quantity of water passing through can be regulated. No water will pass over the dam at any time. Indeed the dam crest will be from 5 to 10 feet above the highest level of the lake behind it.

The road in from the Cody entrance passes over the present "Fishing Bridge." This is a rickety old pile structure, that must soon be replaced. A permanent, artistic bridge can be put on top of the dam. This will be done without expense to the Government.

Yellowstone Lake.—Yellowstone Lake has an area of about 89,000 acres or nearly 140 square miles. It is irregular in shape, with about 100 miles of shore line. Excepting two places, one at the south end where the Yellowstone River enters and the other at the north end near the mouth of Pelican Creek, the banks are comparatively steep. Indeed, for the greater part of the distance along the shore line the banks are precipitate.

Governmental topography reveals that any such raise as can possibly be made in the elevation of the lake surface, will increase the submerged area only a negligible amount. In no event will this be more than 2 per cent and probably it will be only a fraction of 1 per cent. Under present conditions there is a variation of about 6 feet in the level of the lake between the spring period when an excess of flood waters have gathered and the summer period after these floods have run out.

Raising the lake.—The volume of water that annually drains from Lake Yellowstone, averages 1,215,425 acre-feet. (An acre-foot is the quantity of water required to cover 1 acre a foot in depth.) The lake area is 89,000 acres.

Assuming that the gates in the dam were closed and remained closed an entire year (this can not be permitted because in the winter a sufficient volume of water must pass to protect the fish, and in the tourist season at least a normal flow must be maintained over the falls and through the Grand Canyon), the water would pile up in the and raise its surface a total of $13\frac{1}{2}$ feet, or $7\frac{1}{2}$ feet above its present maximum level. Making a minimum allowance for the water that must be permitted to pass and the maximum amount the lake can be raised is 7 feet above its present high level. In actual practice the plan is to raise it a little if any above this high water level but simply to hold back flood water sufficient to maintain this high level and have a reserve supply for the latter part of the irrigation season when the tributaries can not furnish enough water to the river to meet the demand. In reality the dam does nothing more than equalize the flow, so that instead of a great volume of water going out of the lake during a 15 or 20 day period in the spring a constant flow will be maintained throughout the season.

Effect on Yellowstone Park.—A dam sufficient to regulate and control the river flow, as described, is the only structure of any kind that will be required in the park. The first canal and diversion works will be in Yankee Jim Canyon, 15 miles outside the park boundary. Other diversion works and canal systems will be miles farther down the stream. The dam will be surmounted by an artistic bridge, now badly

needed. The whole will be an attractive structure, quite as pleasing and harmonious as the beautiful concrete arch bridge that now spans the canyon above the falls. The average tourist will pass the spot without realization that it is a dam site at all.

The opposition.—Stories circulated by our eastern friends, who are unwittingly permitting their imaginations to run riot, are to the effect that great areas of forest are to be submerged; ugly stretches of mud bank left by the draining of the lake; game run out of the park; the paint pots, geysers, and other scenic wonders destroyed. This is all pure fiction. The lake can in no event be raised more than a couple of feet above the elevation to which high winds now drive the waves on to the shore. There are no trees along the beach thus created. If a few come within the line of a new beach to be created they can be removed. A 6-foot seasonal variation in the lake level under present conditions reveals not an acre of mud bank along the entire hundred miles of shore. Why then will there be mud banks after the dam is built? As a matter of fact, there would be no mud banks if the lake was raised 20 feet. In the first place there is little or no soil around the shore. It is mostly either formation or rock. Secondly, a body of water large enough to have vigorous wave action never has mud banks. The waves wear the soil out and leave only sand and gravel. The beaches around all large lakes and along the sea shore are ample evidence of this. Game is apparently not disturbed by the concrete bridge at the canyon. Why will it be run out of the park by a dam and bridge at the lake? The paint pots are a hundred feet or more in elevation above the maximum height to which the lake can possibly be raised while the geysers are 20 miles away on the opposite side of a mountain range.

The actual damage.—Some of the officials of the Interior Department, while admitting the need of a dam for water control on the Yellowstone, advance the idea that it should be located in Yankee Jim Canyon outside the park. Surveys have been made to determine the feasibility of this site, and the measure of good that can be accomplished by the construction of a dam here. These surveys show that there is an excellent site for a dam 170 feet high. To build it higher than this would back the river up over the town of Gardiner and into the park. A dam this height will provide sufficient storage to hold the flood water less than a week, after which the floods would continue down the stream as before. It will conserve sufficient irrigation water to reclaim only 150,000 acres of land. On the other hand it will submerge 16 miles of railroad, isolate the town of Gardiner and practically block the northern entrance to Yellowstone Park. Clearly a dam at this point is not feasible and there is no other place along the entire river that affords even a prospective dam site.

If raised to a maximum the lake water would cover three or four hot springs. A governmental bulletin says there are 5,000 of these in the park. This probably does not include the two or three hundred that are already submerged by the lake, and may be seen bubbling up from the bottom.

The hot spring crater, known as the Fish Cone, would be submerged a part of the year. Near it are three similar craters at slightly higher elevations. The lake level could hardly be fixed so as not to leave at least one of these as a "Fish Cone." About half a mile of road might have to be raised a couple of feet to prevent seepage from making it soft. This is the sum total of damage that can possibly be done.

On the other hand the dam will hold back the floods that go out in the spring. This volume of water will be released so as to afford a steady and very much increased flow over the falls and through the Grand Canyon all during the tourist season. This will tremendously enhance the beauty of the canyon and falls. In truth, the project is not a damage to the park but a distinct advantage to it.

Who will control?—Congress will be asked to grant the required permit to the State of Montana. Either the State or an irrigation district composed of all the land to be benefited by the dam, will undertake the construction and furnish the finances. No water will be rented or sold. It will continue to be had by appropriation from the river, just as it has in the past. The project is not a money-making scheme for any group of individuals any more than a municipal water plant is a money-making scheme for the property owners in the city where it is installed.

The argument that a bad precedent will be established has little weight. There is already a dam in Yosemite Park, by congressional permission. After this dam is built no other dam can be constructed in any park except by the consent of Congress. Congress is not going to permit any public park to be exploited. The people who live near these parks and have an interest inspired by sentiment as well as an even larger interest inspired by the revenue these playgrounds bring are not willing that Congress permit such a policy. The citizenship of Montana asks for no favoritism, but for simple justice in the granting of a concession that means a billion dollars in future development. A concession that costs the Government nothing and may be granted without harm to the Yellowstone National Park.

